=> FILE REG
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=> FILE HCAPLUS
FILE 'HCAPLUS' ENTERED AT 11:24:41 ON 29 MAR 2004
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FILE COVERS 1907 - 29 Mar 2004 VOL 140 ISS 14
FILE LAST UPDATED: 28 Mar 2004 (20040328/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

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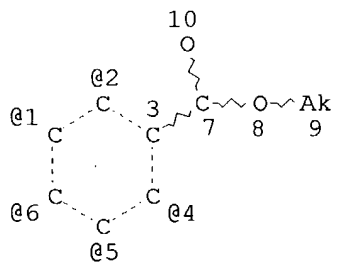

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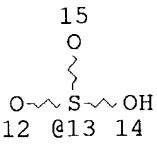

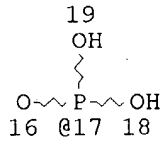

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GRAPH ATTRIBUTES:
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NUMBER OF NODES IS 19

STEREO ATTRIBUTES: NONE
L43 3029 SEA FILE=REGISTRY SSS FUL L41
L47 2744 SEA FILE=HCAPLUS ABB=ON L43
L48 29 SEA FILE=HCAPLUS ABB=ON L47 AND POLYANILIN?

=> D L48 ALL 1-29 HITSTR

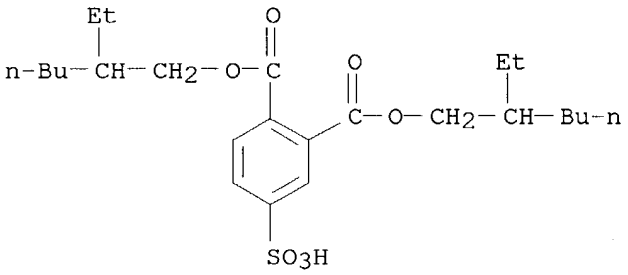
29 CA references with utility

L48 ANSWER 1 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2003:579278 HCAPLUS
DN 139:365643
ED Entered STN: 29 Jul 2003
TI Molecular dynamics in plastic conducting compounds of **polyaniline**
AU Djurado, D.; Bee, M.; Gonzalez, M.; Mondelli, C.; Dufour, B.; Rannou, P.; Pron, A.; Travers, J. P.
CS Laboratoire de Spectrometrie Physique, Universite J. Fourier, Grenoble I, St Martin d'Heres, 38402, Fr.
SO Chemical Physics (2003), 292(2-3), 355-361
CODEN: CMPHC2; ISSN: 0301-0104
PB Elsevier Science B.V.
DT Journal
LA English
CC 37-5 (Plastics Manufacture and Processing)
Section cross-reference(s): 76
AB **Polyaniline** has been protonated (doped) with phthalosulfonic acid and sulfo-succinic acid diesters. Freestanding films exhibiting high elec. conductivity and good plasticity were obtained. The dynamics of protons attached to the alkyl chains of these "plastdopants" has been studied by using quasielastic neutron scattering techniques. A glass transition was thus detected at a temperature corresponding to that measured by DSC. This dynamical transition occurred in the temperature range, in which both a thermochromism and an insulator-metal elec. transitions were also observed The local diffusive motions of these protons are described in terms of diffusion within spheres whose temperature dependent radii are distributed in size along the alkyl chains.
ST **polyaniline** phthalosulfonic sulfosuccinic acid diester dopant conductor mol dynamics
IT Polymer chains
(dynamics; mol. dynamics in plastic conducting compds. of **polyaniline**)
IT Conducting polymers
Dopants
Elasticity
Electric conductivity
Elongation at break
Glass transition
Microstructure
Molecular dynamics
Simulation and Modeling, physicochemical
(mol. dynamics in plastic conducting compds. of **polyaniline**)
IT **Polyanilines**
RL: PEP (Physical, engineering or chemical process); POF (Polymer in formulation); PRP (Properties); PYP (Physical process); PROC (Process); USES (Uses)
(phthalosulfonic acid and sulfosuccinic acid diesters-doped; mol. dynamics in plastic conducting compds. of **polyaniline**)
IT 10041-19-7, Bis(2-ethylhexyl) sulfosuccinate **264192-28-1**
RL: MOA (Modifier or additive use); USES (Uses)
(dopant; mol. dynamics in plastic conducting compds. of **polyaniline**)
IT 25233-30-1, **Polyaniline**
RL: PEP (Physical, engineering or chemical process); POF (Polymer in formulation); PRP (Properties); PYP (Physical process); PROC (Process); USES (Uses)
(phthalosulfonic acid and sulfosuccinic acid diesters-doped; mol. dynamics in plastic conducting compds. of **polyaniline**)

RE.CNT 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Anon; http://www.ill.fr
(2) Beadle, P; Synth Met 1998, V95, P29 HCAPLUS
(3) Bee, M; Appl Phys A 2002, V74(Suppl), PS402
(4) Cao, Y; Synth Met 1992, V48, P91 HCAPLUS
(5) Djurado, D; Phys Rev B 2002, V65, P184202
(6) Dufour, B; Chem Mater 2001, V13, P4032 HCAPLUS
(7) Frick, B; Physica B 1990, V234-236, P1177
(8) Inganas, O; Hanbook of Organic Conductive Molecules and Polymers 1997, V3, P785
(9) Kohlman, R; Handbook of Conducting Polymers, 2nd ed 1998, P85
(10) Lechner, R; Com Phys (London) 1977, V2, P207 HCAPLUS
(11) MacDiarmid, A; Conjugated Polymeric Materials: Opportunities in Electronics, Optoelectronics and Molecular Electronics 1990, P53 HCAPLUS
(12) Martens, H; Phys Rev B 2001, V63, P073203
(13) McGehee, M; Advances in Synthetic Metals. Twenty years of Progress in Science and Technology 1999, P98
(14) Olinga, T; Macromolecules 2000, V33, P2107 HCAPLUS
(15) Prigodin, V; Synth Met 2002, V125, P43 HCAPLUS
(16) Volino, F; Mol Phys 1980, V41, P271 HCAPLUS
(17) Xia, Y; Chem Mater 1995, V7, P443 HCAPLUS

IT **264192-28-1**
RL: MOA (Modifier or additive use); USES (Uses)
(dopant; mol. dynamics in plastic conducting compds. of **polyaniline**)

RN 264192-28-1 HCAPLUS
CN 1,2-Benzenedicarboxylic acid, 4-sulfo-, 1,2-bis(2-ethylhexyl) ester (9CI) (CA INDEX NAME)



L48 ANSWER 2 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2003:413476 HCAPLUS
DN 139:134044
ED Entered STN: 30 May 2003
TI Doping-induced stretchability of metallic poly(aniline)
AU Dufour, B.; Rannou, P.; Djurado, D.; Bee, M.; Pron, A.
CS Laboratoire de Physique des Metaux Synthetiques, UMR 5819-SPrAM (CEA-CNRS-Univ. J. FOURIER), DRFMC, CEA-Grenoble, Grenoble, 38 054/9, Fr.
SO Synthetic Metals (2003), 135-136, 323-324
CODEN: SYMEDZ; ISSN: 0379-6779
PB Elsevier Science B.V.
DT Journal
LA English
CC 36-5 (Physical Properties of Synthetic High Polymers)
Section cross-reference(s): 76
AB **Polyaniline**/dopant/solvent systems were studied to obtain conducting **polyaniline** (PANI) showing improved metallic conductivity, mech. flexibility, and durability as compared to (+/-)-camphor-10-sulfonic acid (CSA) protonated PANI films processed from m-cresol (MC) solns. The protonating agents, as counterion sources and plasticizers, i.e., plastdopants, studied include diesters of 4-phthalosulfonic acids (DEPSA) and diesters of sulfosuccinic acid (DESSA), specifically, di(2-ethylhexyl) ester of 4-phthalosulfonic acid (DEHEPSA), di-n-dodecyl ester of 4-phthalosulfonic acid (DDOEPSA), di(2-butoxyethyl) ester of 4-phthalosulfonic acid (DB2EPSA), di(2-ethylhexyl) ester of sulfosuccinic acid (DEHESSA), di-n-dodecyl ester of sulfosuccinic acid (DDOESSA), di(2-butoxyethyl) ester of sulfosuccinic acid (DB2ESSA), and di[2-(2-butoxyethoxy)ethyl] ester of sulfosuccinic acid (DB3ESSA). Preliminary carrier transport measurements of room temperature stretched PANI films protonated with sulfosuccinic acid diesters show a significant increase of conductivity at room temperature, by a factor of 1.3 and 2.7 for 77% stretched PANI-DEHESSA(0.5) and 150% stretched PANI-DB3ESSA(0.5).
ST **polyaniline** metallic cond stretchability plastdopant sulfonate ester; phthalosulfonic acid ester protonation counterion **polyaniline** flexibility durability; sulfosuccinic acid ester plastdopant stretching **polyaniline** metallic cond
IT Conducting polymers
Counterions
Flexibility
Plasticizers
Proton transfer
(metallic conductivity and flexibility of **polyaniline** induced by diesters of phthalosulfonic acid and sulfosuccinic acid as counterion dopant/plasticizers)
IT **Polyanilines**
RL: PRP (Properties)
(metallic conductivity and flexibility of **polyaniline** induced by diesters of phthalosulfonic acid and sulfosuccinic acid as counterion dopant/plasticizers)
IT Electric conductivity
(temperature dependent, metallic; metallic conductivity and flexibility of **polyaniline** induced by diesters of phthalosulfonic acid and sulfosuccinic acid as counterion dopant/plasticizers)
IT Electric current carriers
(transport, anisotropic; metallic conductivity and flexibility of **polyaniline** induced by diesters of phthalosulfonic acid and sulfosuccinic acid as counterion dopant/plasticizers)

IT **159467-97-7**, 4-Phthalosulfonic acid di(n-dodecyl) ester
264192-28-1, 4-Phthalosulfonic acid di(2-ethylhexyl) ester
384330-08-9, 4-Phthalosulfonic acid di(2-butoxyethyl) ester
RL: MOA (Modifier or additive use); PRP (Properties); USES (Uses)
(counterion source and plasticizer; metallic conductivity and flexibility of **polyaniline** induced by diesters of phthalosulfonic acid and sulfosuccinic acid as counterion dopant/plasticizers)

IT 3700-71-8, Didodecyl sulfosuccinate 10041-19-7, Bis(2-ethylhexyl) sulfosuccinate 503475-18-1, Di(2-butoxyethyl) sulfosuccinate 503475-19-2, Di(2-(2-butoxyethoxy)ethyl) sulfosuccinate
RL: MOA (Modifier or additive use); PRP (Properties); USES (Uses)
(metallic conductivity and flexibility of **polyaniline** induced by diesters of phthalosulfonic acid and sulfosuccinic acid as counterion dopant/plasticizers)

IT 25233-30-1, **Polyaniline**
RL: PRP (Properties)
(metallic conductivity and flexibility of **polyaniline** induced by diesters of phthalosulfonic acid and sulfosuccinic acid as counterion dopant/plasticizers)

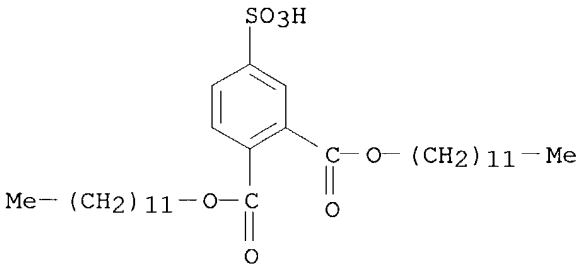
RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

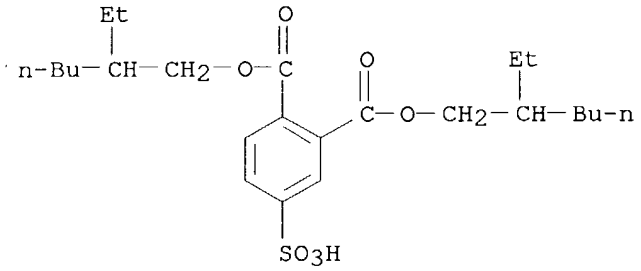
(1) Cao, Y; Synth Met 1992, V48, P91 HCAPLUS
(2) Dufour, B; Chem Mater 2001, V13, P4032 HCAPLUS
(3) Dufour, B; In preparation for submission to Chem Mater
(4) Gronendaal, L; Adv Mater 2000, V12, P481
(5) Olinga, T; Macromolecules 2000, V33, P2107 HCAPLUS
(6) Paul, R; Synth Met 2000, V114, P27 HCAPLUS
(7) Rannou, P; Synth Met 1999, V101, P474 HCAPLUS
(8) Rannou, P; Synth Met 1999, V101, P829 HCAPLUS
(9) Reghu, M; Phys Rev B 1993, V47, P1758 HCAPLUS

IT **159467-97-7**, 4-Phthalosulfonic acid di(n-dodecyl) ester
264192-28-1, 4-Phthalosulfonic acid di(2-ethylhexyl) ester
384330-08-9, 4-Phthalosulfonic acid di(2-butoxyethyl) ester
RL: MOA (Modifier or additive use); PRP (Properties); USES (Uses)
(counterion source and plasticizer; metallic conductivity and flexibility of **polyaniline** induced by diesters of phthalosulfonic acid and sulfosuccinic acid as counterion dopant/plasticizers)

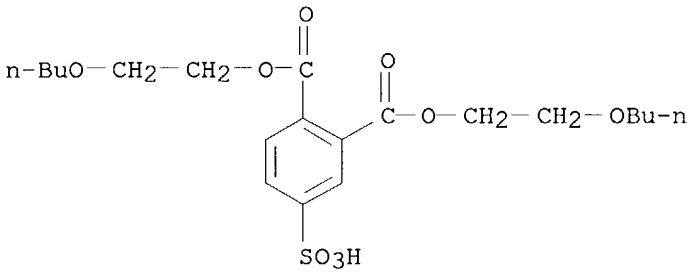
RN 159467-97-7 HCAPLUS
CN 1,2-Benzenedicarboxylic acid, 4-sulfo-, 1,2-didodecyl ester (9CI) (CA INDEX NAME)



RN 264192-28-1 HCAPLUS
CN 1,2-Benzenedicarboxylic acid, 4-sulfo-, 1,2-bis(2-ethylhexyl) ester (9CI) (CA INDEX NAME)

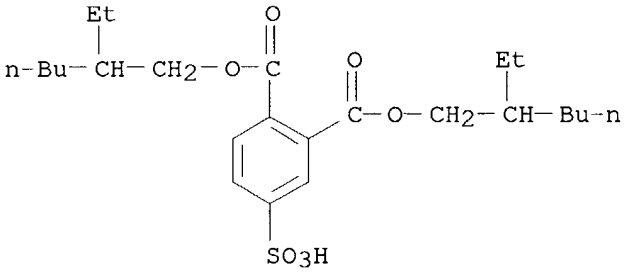


RN 384330-08-9 HCAPLUS
CN 1,2-Benzenedicarboxylic acid, 4-sulfo-, 1,2-bis(2-butoxyethyl) ester (9CI) (CA INDEX NAME)

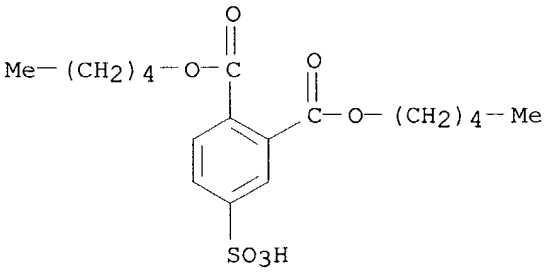


L48 ANSWER 3 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2003:413446 HCAPLUS
DN 139:134041
ED Entered STN: 30 May 2003
TI Lattice stiffening and electronic localization in conducting compounds of **polyaniline**
AU Djurado, D.; Bee, M.; Dufour, B.; Rannou, P.; Pron, A.; Travers, J. P.
CS Universite J. Fourier - Grenoble I, Laboratoire de Spectrometrie Physique (UMR UJF/CNRS 5588), B.P.87, St Martin d'Heres, 38402, Fr.
SO Synthetic Metals (2003), 135-136, 259-260
CODEN: SYMEDZ; ISSN: 0379-6779
PB Elsevier Science B.V.
DT Journal
LA English
CC 36-5 (Physical Properties of Synthetic High Polymers)
Section cross-reference(s): 76
AB The mol. dynamics of flexible counterions (plastdopants) in metallic films of **polyaniline** (PANI) was studied using incoherent quasielastic neutron scattering. The plastdopants studied are 4-phthalosulfonic acid di(2-ethylhexyl) and di(n-pentyl) esters and the di(2-ethylhexyl) ester of sulfosuccinic acid. The change of direction of the slope of d.c. conductivity curves of the films always occurs at temps. corresponding to the glass transition of the counterion sublattice. The times involved in changes of protons lying on alkyl chains of plastdopants are typically 10-11-10-12 s. In the framework of models of electronic transport in metallic **polyaniline**, counter-ion dynamics has to be taken into consideration to fully understand the unusual zero-frequency metallic state in **polyaniline**.
ST **polyaniline** metallic cond phthalosulfonate sulfosuccinate ester plastdopant; lattice stiffening flexible counterion plasticizer **polyaniline** mol dynamics; cond **polyaniline** electronic transport counterion dynamics metallic state
IT Polymer chains
(flexible, of plastdopant; role of plastdopant on lattice stiffening and electronic localization in metallic **polyaniline**)
IT Elongation at break
Glass transition temperature
(of plastdopant; role of plastdopant on lattice stiffening and electronic localization in metallic **polyaniline**)
IT Metal-insulator transition
(of **polyaniline**-plastdopant vs. temperature; role of plastdopant on lattice stiffening and electronic localization in metallic **polyaniline**)
IT Conducting polymers
Counterions
Electric conductivity
Molecular dynamics
(role of plastdopant on lattice stiffening and electronic localization in metallic **polyaniline**)
IT **Polyanilines**
RL: PRP (Properties)
(role of plastdopant on lattice stiffening and electronic localization in metallic **polyaniline**)
IT 10041-19-7, Bis(2-ethylhexyl) sulfosuccinate **264192-28-1** **384330-05-6**
RL: MOA (Modifier or additive use); PRP (Properties); USES (Uses)
(counterion source and plasticizer; role of plastdopant on lattice stiffening and electronic localization in metallic **polyaniline**

)
IT 25233-30-1, **Polyaniline**
RL: PRP (Properties)
(role of plastdopant on lattice stiffening and electronic localization in metallic **polyaniline**)
RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Anon; http://www.ill.fr/
(2) Djurado, D; Phys Rev B 2002, V65, P184202
(3) Dufour, B; Chem Mater 2001, V13, P4032 HCAPLUS
(4) Martens, H; Phys Rev B 2001, V63, P073203
(5) Olinga, T; Macromolecules 2000, V33, P2107 HCAPLUS
(6) Prigodin, V; Synth Met 2002, V125, P43 HCAPLUS
IT **264192-28-1 384330-05-6**
RL: MOA (Modifier or additive use); PRP (Properties); USES (Uses)
(counterion source and plasticizer; role of plastdopant on lattice stiffening and electronic localization in metallic **polyaniline**
)
RN 264192-28-1 HCAPLUS
CN 1,2-Benzenedicarboxylic acid, 4-sulfo-, 1,2-bis(2-ethylhexyl) ester (9CI) (CA INDEX NAME)



RN 384330-05-6 HCAPLUS
CN 1,2-Benzenedicarboxylic acid, 4-sulfo-, 1,2-dipentyl ester (9CI) (CA INDEX NAME)



L48 ANSWER 4 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2003:413358 HCAPLUS
DN 139:150177
ED Entered STN: 30 May 2003
TI The role of chain and dopant engineering in the preparation of processible conducting polymers with desired properties
AU Dufour, B.; Rannou, P.; Djurado, D.; Zagorska, M.; Kulszewicz-Bajer, I.; Pron, A.
CS Laboratoire de Physique des Metaux Synthetiques. UMR 5819-SPrAM (CEA-CNRS-Univ. J. FOURIER), DRFMC., CEA-Grenoble, Grenoble, 38 054/9, Fr.
SO Synthetic Metals (2003), 135-136, 63-68
CODEN: SYMEDZ; ISSN: 0379-6779
PB Elsevier Science B.V.
DT Journal
LA English
CC 36-5 (Physical Properties of Synthetic High Polymers)
Section cross-reference(s): 73, 76
AB Spectroscopic, structural and processing characteristics are described of **polyaniline** (PANI) containing protonating agents, namely diesters of 4-phthalosulfonic acid (DEPSA) and diesters of sulfosuccinic acid (DESSA). PANI containing DEPSA or DESSA is considered as a comb-shaped macromol. system in which anions are regarded as side groups attached to the main chain via ionic bonds. This type of supramol. architecture promotes self-organization into layered, or in some cases, lamellar structures. Plasticizing ester groups, in the anions, lower the glass transition temperature, Tg, which in all cases is below room temperature This low Tg induces several features in PANI, i.e., the conducting polymer can be stretched at room temperature up to three times its original length, PANI exhibits low temperature thermochromism which is manifested by an abrupt transformation of the UV-vis-NIR spectrum characteristic of delocalized charge carriers into a spectrum typical of localized charge carriers. An interesting correlation was found between the temperature of the onset of this low temperature thermochromism, the temperature of the metal to insulator transition determined from the $\sigma = f(T)$ relation and the temperature of freezing of the counterion mol. motion derived from the anal. of the temperature dependence of elastic neutron scattering intensity. The coincidence of these three temps. underlines a key role of the counterion motion in the transport properties of low Tg, plasticized PANI.
ST **polyaniline** protonating phthalosulfonate sulfosuccinate ester induced stretching; conducting polymer lower glass transition temp
polyaniline ester protonation; plasticizing ester
polyaniline low temp thermochromism; metal insulator transition
polyaniline sulfosuccinate phthalosulfonate ester
IT Conducting polymers
Electric conductivity
Electric conductivity transition
Electric current carriers
Glass transition temperature
Plasticizers
Thermochromism
UV and visible spectra
(role of phthalosulfonate and sulfosuccinate esters in stretching and Tg and thermochromism and carrier localization in **polyaniline**)
IT **Polyanilines**
RL: PRP (Properties)

(role of phthalosulfonate and sulfosuccinate esters in stretching and Tg and thermochromism and carrier localization in **polyaniline**)

IT Force constant
(stretching force constant; role of phthalosulfonate and sulfosuccinate esters in stretching and Tg and thermochromism and carrier localization in **polyaniline**)

IT 3700-71-8, Didodecyl sulfosuccinate 10041-19-7, Bis(2-ethylhexyl) sulfosuccinate 23243-42-7, Dihexyl sulfosuccinate **159467-97-7**, Didodecyl 4-sulfophthalate **264192-28-1**, 4-Phthalosulfonic acid di(2-ethylhexyl) ester **384330-05-6**, Dipentyl 4-sulfophthalate **384330-06-7**, Dioctyl 4-sulfophthalate **384330-07-8**, Didecyl 4-sulfophthalate **384330-08-9**, 4-Phthalosulfonic acid di(2-butoxyethyl) ester **384330-09-0** 503475-18-1, Di(2-butoxyethyl) sulfosuccinate
RL: MOA (Modifier or additive use); PRP (Properties); USES (Uses)
(protonating agent, plasticizer; role of phthalosulfonate and sulfosuccinate esters in stretching and Tg and thermochromism and carrier localization in **polyaniline**)

IT 25233-30-1, **Polyaniline**
RL: PRP (Properties)
(role of phthalosulfonate and sulfosuccinate esters in stretching and Tg and thermochromism and carrier localization in **polyaniline**)

RE.CNT 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD

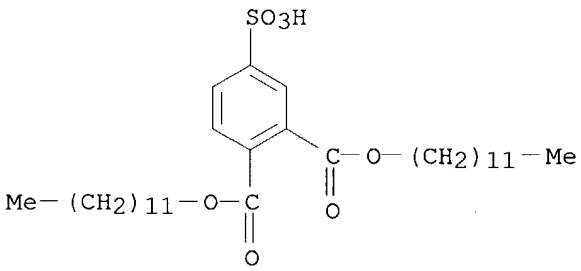
RE

(1) Adams, P; J Phys Condens Matter 1998, V10, P8293 HCAPLUS
(2) Angelopoulos, M; Synth Met 1987, V21, P21 HCAPLUS
(3) Anon; http://www.ill.fr/YellowBook/IN13
(4) Bee, M; Appl Phys A in press
(5) Cao, Y; Synth Met 1992, V48, P91 HCAPLUS
(6) Djurado, D; Phys Rev B 2002, V65, P184202
(7) Dufour, B; Chem Mater 2001, V13, P4032 HCAPLUS
(8) Dufour, B; Synth Met (these proceedings)
(9) Gronendaal, L; Adv Mat 2000, V12, P481
(10) Hundley, M; Synth Met in press
(11) Ikkala, O; Science 2002, V295, P2407 HCAPLUS
(12) Inganas, O; Handbook of organic conductive molecules and polymers 1997, V3, P785
(13) Katz, H; Acc Chem Res 2001, V34, P359 HCAPLUS
(14) Kohlman, R; Handbook of Conducting Polymers, 2nd ed 1998, P85
(15) Norris, I; Macromolecules 1998, V31, P6529 HCAPLUS
(16) Oh, E; Synth Met 2002, V125, P267 HCAPLUS
(17) Olinga, T; Macromolecules 2000, V33, P2107 HCAPLUS
(18) Paul, R; Synth Met 2000, V114, P27 HCAPLUS
(19) Rannou, P; Synth Met 1999, V101, P474 HCAPLUS
(20) Rannou, P; Synth Met 1999, V101, P734 HCAPLUS
(21) Rannou, P; Synth Met 1999, V101, P829 HCAPLUS
(22) Travers, J; Synth Met 1987, V21, P135 HCAPLUS
(23) Xia, Y; Chem Mater 1995, V7, P443 HCAPLUS
(24) Yen, K; J Chem, Soc Chem Commun 1986, P1346

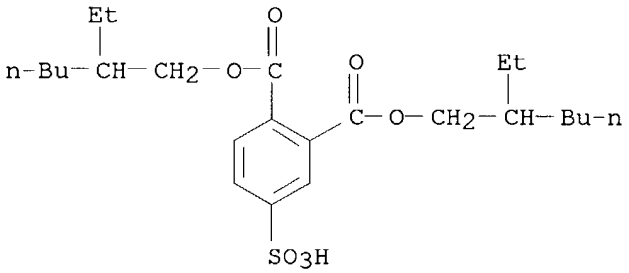
IT **159467-97-7**, Didodecyl 4-sulfophthalate **264192-28-1**, 4-Phthalosulfonic acid di(2-ethylhexyl) ester **384330-05-6**, Dipentyl 4-sulfophthalate **384330-06-7**, Dioctyl 4-sulfophthalate **384330-07-8**, Didecyl 4-sulfophthalate **384330-08-9**, 4-Phthalosulfonic acid di(2-butoxyethyl) ester **384330-09-0**
RL: MOA (Modifier or additive use); PRP (Properties); USES (Uses)
(protonating agent, plasticizer; role of phthalosulfonate and

sulfosuccinate esters in stretching and Tg and thermochromism and carrier localization in **polyaniline**)

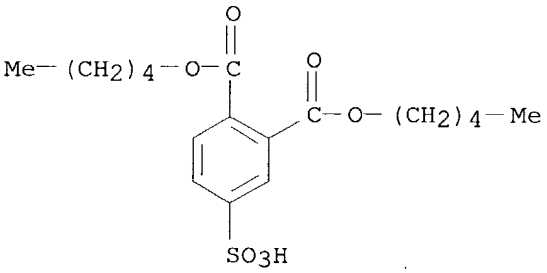
RN 159467-97-7 HCAPLUS
CN 1,2-Benzenedicarboxylic acid, 4-sulfo-, 1,2-didodecyl ester (9CI) (CA INDEX NAME)



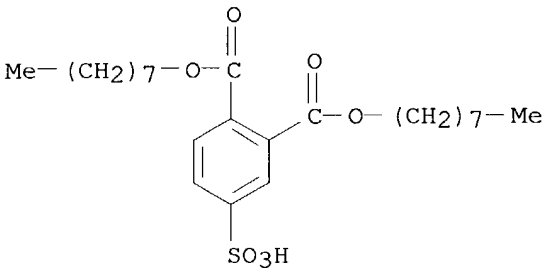
RN 264192-28-1 HCAPLUS
CN 1,2-Benzenedicarboxylic acid, 4-sulfo-, 1,2-bis(2-ethylhexyl) ester (9CI) (CA INDEX NAME)



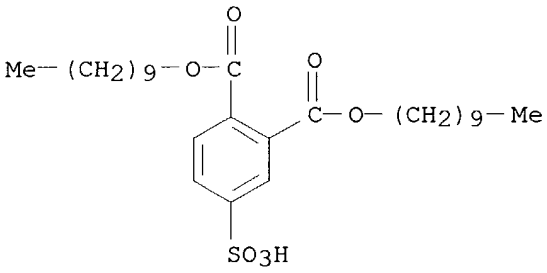
RN 384330-05-6 HCAPLUS
CN 1,2-Benzenedicarboxylic acid, 4-sulfo-, 1,2-dipentyl ester (9CI) (CA INDEX NAME)



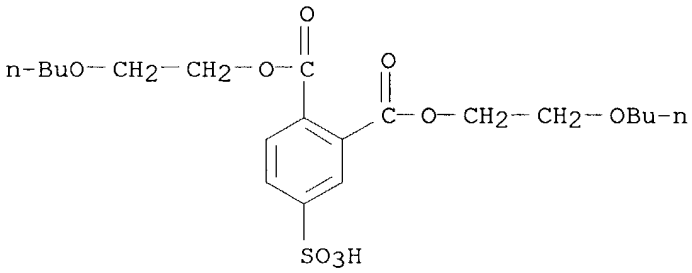
RN 384330-06-7 HCAPLUS
CN 1,2-Benzenedicarboxylic acid, 4-sulfo-, 1,2-dioctyl ester (9CI) (CA INDEX NAME)



RN 384330-07-8 HCAPLUS
CN 1,2-Benzenedicarboxylic acid, 4-sulfo-, 1,2-didecyl ester (9CI) (CA INDEX NAME)

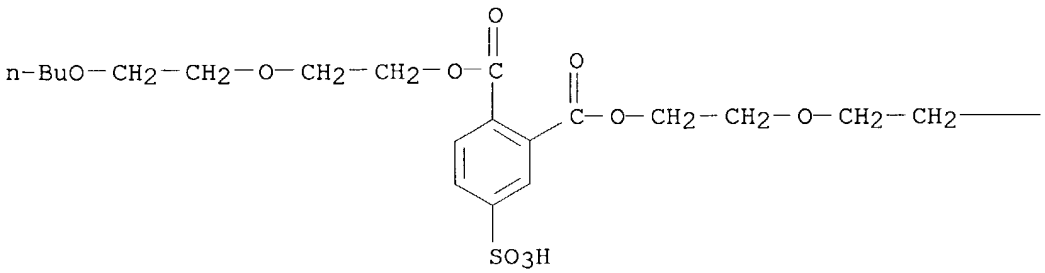


RN 384330-08-9 HCAPLUS
CN 1,2-Benzenedicarboxylic acid, 4-sulfo-, 1,2-bis(2-butoxyethyl) ester (9CI) (CA INDEX NAME)



RN 384330-09-0 HCAPLUS
CN 1,2-Benzenedicarboxylic acid, 4-sulfo-, 1,2-bis[2-(2-butoxyethoxy)ethyl] ester (9CI) (CA INDEX NAME)

PAGE 1-A

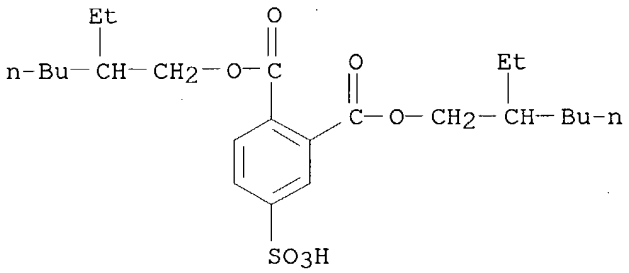


PAGE 1-B

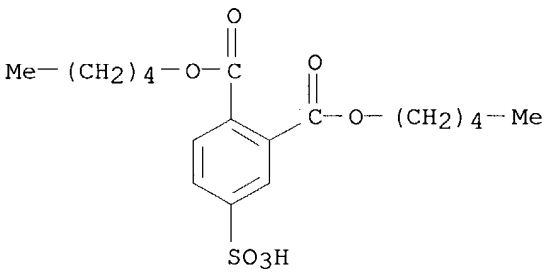
—OBu-n

L48 ANSWER 5 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2003:230349 HCAPLUS
DN 139:76666
ED Entered STN: 25 Mar 2003
TI Dynamics of flexible counter-ions in conducting **polyaniline**: A quasielastic neutron-scattering study
AU Bee, M.; Djurado, D.; Combet, J.; Gonzalez, M. A.; Rannou, P.; Dufour, B.; Marque, D.
CS Institut Laue-Langevin, Grenoble, 38042, Fr.
SO Applied Physics A: Materials Science & Processing (2002), 74(Suppl., Pt. 1), S402-S404
CODEN: APAMFC; ISSN: 0947-8396
PB Springer-Verlag
DT Journal
LA English
CC 76-1 (Electric Phenomena)
Section cross-reference(s): 36
AB Conducting **polyaniline** protonated with sulfonic flexible counter-ions was investigated by quasielastic incoherent neutron scattering. In addition to their role in elec. properties, the flexible counterions also increase the elasticity of the samples. As in the case of more rigid counterions, polymer chains appear as very stiff objects whose dynamics is completely outside the investigated time scale. Conversely, the counterion dynamics was proved to be of major importance in charge transport since a dynamical transition is observed precisely in the temperature range where the electronic properties change from a metallic to a semiconducting regime.
ST doped **polyaniline** counterion phase transition
IT Conducting polymers
Counterions
Doping
Elasticity
Electric conductivity transition
Electron transport
Neutron scattering
Phase transition temperature
Polymer chains
(dynamics of flexible counterions in conducting **polyaniline**)
IT **Polyanilines**
RL: PRP (Properties)
(dynamics of flexible counterions in conducting **polyaniline**)
IT 25233-30-1, **Polyaniline 264192-28-1**,
1,2-Di(2-ethylhexyl) 4-sulfophthalate **384330-05-6**, Dipentyl 4-sulfophthalate
RL: PRP (Properties)
(dynamics of flexible counterions in conducting **polyaniline**)
RE.CNT 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Bee, M; Chem Phys, in press
(2) Bee, M; Mol Phys 1994, V81, P57 HCAPLUS
(3) Bee, M; Physica B 2001, V301, P49 HCAPLUS
(4) Bee, M; in press
(5) Carpentier, L; Mol Phys 1989, V68, P1367 HCAPLUS
(6) Djurado, D; Phys Rev B, submitted
(7) Djurado, D; Phys Rev B, submitted
(8) Djurado, D; Synth Met 2001, V119, P411 HCAPLUS
(9) Giroud-Godquin, M; Mol Phys 1989, V68, P1353
(10) Olinga, T; Macromolecules 2000, V33, P2107 HCAPLUS

IT **264192-28-1,** 1,2-Di(2-ethylhexyl) 4-sulfophthalate
384330-05-6, Dipentyl 4-sulfophthalate
RL: PRP (Properties)
(dynamics of flexible counterions in conducting **polyaniline**)
RN 264192-28-1 HCAPLUS
CN 1,2-Benzenedicarboxylic acid, 4-sulfo-, 1,2-bis(2-ethylhexyl) ester (9CI) (CA INDEX NAME)



RN 384330-05-6 HCAPLUS
CN 1,2-Benzenedicarboxylic acid, 4-sulfo-, 1,2-dipentyl ester (9CI) (CA INDEX NAME)



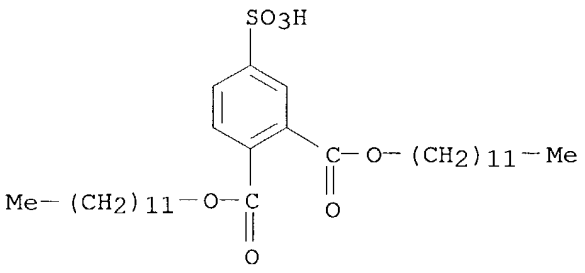
L48 ANSWER 6 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2002:713323 HCAPLUS
DN 137:370738
ED Entered STN: 20 Sep 2002
TI Temperature-Induced Transitions in Doped **Polyaniline**: Correlation between Glass Transition, Thermochromism and Electrical Transport
AU Rannou, Patrice; Dufour, Bruno; Travers, Jean-Pierre; Pron, Adam; Djurado, David; Janeczek, Henryk; Sek, Danuta
CS Laboratoire de Physique des Metaux Synthetiques, CEA-Grenoble, Grenoble, 38054, Fr.
SO Journal of Physical Chemistry B (2002), 106(41), 10553-10559
CODEN: JPCBFK; ISSN: 1520-6106
PB American Chemical Society
DT Journal
LA English
CC 37-5 (Plastics Manufacture and Processing)
AB Doping (protonation) of **polyaniline** (PANI) in the oxidation state of emeraldine with diesters of 4-sulfophthalic acid containing flexible alkyl or alkoxy substituents leads to flexible, partially crystalline polymeric conductors which show supramol. organization of layered-type. Diesters doped PANI exhibits two glass transition temps. Tg1 and Tg2 corresponding to the freezing of the movement of the dopant substituents and of the movements of polymer-dopant anion association, resp. A strong thermochromic effect in the UV-vis-NIR spectra is observed at sub-Tg1 temps. indicating increasing charge carriers localization. This thermochromic effect can be correlated with the σdc= f(T) relationship which unequivocally shows that at low temps. (T < 100 K) the sample is in the insulating state which is another manifestation of the increasing localization of charge carriers.
ST doped **polyaniline** glass transition thermochromism elec transport; sulfophthalic acid doped **polyaniline**
IT Electric conductivity
Glass transition temperature
Thermochromism
(correlation between glass transition, thermochromism and elec. transport of sulfophthalate-doped **polyaniline**)
IT **Polyanilines**
RL: PEP (Physical, engineering or chemical process); POF (Polymer in formulation); PRP (Properties); PYP (Physical process); PROC (Process); USES (Uses)
(correlation between glass transition, thermochromism and elec. transport of sulfophthalate-doped **polyaniline**)
IT Activation energy
(reduced; correlation between glass transition, thermochromism and elec. transport of sulfophthalate-doped **polyaniline**)
IT **159467-97-7 264192-28-1 384330-05-6 384330-06-7 384330-08-9 384330-09-0**
RL: MOA (Modifier or additive use); USES (Uses)
(correlation between glass transition, thermochromism and elec. transport of sulfophthalate-doped **polyaniline**)
IT 25233-30-1, **Polyaniline**
RL: PEP (Physical, engineering or chemical process); POF (Polymer in formulation); PRP (Properties); PYP (Physical process); PROC (Process); USES (Uses)
(correlation between glass transition, thermochromism and elec. transport of sulfophthalate-doped **polyaniline**)
RE.CNT 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE
(1) Abell, L; Synth Met 1997, V84, P127 HCAPLUS
(2) Adams, P; J Phys Condens Mater 1998, V10, P8293 HCAPLUS
(3) Beadle, P; Synth Met 1998, V95, P29 HCAPLUS
(4) Bee, M; Appl Phys A, in press 2002
(5) Bredas, J; Macromolecules 1990, V23, P1150 HCAPLUS
(6) Cao, Y; Synth Met 1992, V48, P91 HCAPLUS
(7) Chen, H; Macromolecules 1999, V32, P2967 HCAPLUS
(8) Djurado, D; ILL Ann Rep 2000, Sci Highlights 2001, P62
(9) Dufour, B; Chem Mater 2001, V13, P4032 HCAPLUS
(10) Ikkala, O; Macromolecules 1995, V28, P7088 HCAPLUS
(11) Inganas, O; Handbook of organic conductive molecules and polymers 1997, V3, P785
(12) Jana, T; Langmuir 2000, V16, P3141 HCAPLUS
(13) Jana, T; Langmuir 2001, V17, P5768 HCAPLUS
(14) Kaiser, A; Adv Mater 2001, V13, P927 HCAPLUS
(15) Lee, H; Macromolecules 1995, V28, P7645 HCAPLUS
(16) Levon, K; Polymer 1995, V36, P2733 HCAPLUS
(17) Mardalen, J; Macromol Chem Phys 1995, V196, P553 HCAPLUS
(18) Masters, J; J Chem Phys 1992, V96, P4768 HCAPLUS
(19) Menon, R; Handbook of Conducting Polymers, 2nd ed 1998, P27
(20) Monkman, A; Mol Cryst Liq Cryst 1993, V236, P189 HCAPLUS
(21) Murthy, S; J Chem Soc, Faraday Trans 1993, V89, P509 HCAPLUS
(22) Norris, I; Macromolecules 1998, V31, P6529 HCAPLUS
(23) Olinga, T; Macromolecules 2000, V33, P2107 HCAPLUS
(24) Paul, R; Synth Met 2000, V114, P27 HCAPLUS
(25) Prosa, T; Macromolecules 1992, V25, P4364 HCAPLUS
(26) Rannou, P; Ph D Thesis, Universite Joseph Fourier-Grenoble I, Chapter III 1998, P307
(27) Sheng, P; Phys Rev B 1980, V21, P2180 HCAPLUS
(28) van der Pauw, L; J Appl Phys 1971, V42, P2971
(29) van der Pauw, L; Philips Res Repts 1958, V13, P1
(30) Vikki, T; Macromolecules 1997, V30, P4064 HCAPLUS
(31) Wernet, W; Makromol Chem, Rapid Commun 1984, V5, P157 HCAPLUS
(32) Xia, Y; Chem Mater 1995, V7, P443 HCAPLUS
(33) Zabrodskii, A; Zh Eksp Teor Fiz 1984, V86, P727 HCAPLUS

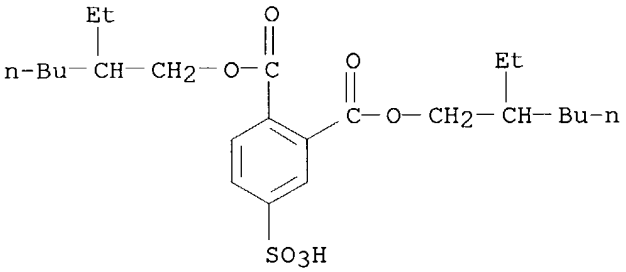
IT **159467-97-7 264192-28-1 384330-05-6 384330-06-7 384330-08-9 384330-09-0**
RL: MOA (Modifier or additive use); USES (Uses)
(correlation between glass transition, thermochromism and elec. transport of sulfophthalate-doped **polyaniline**)

RN 159467-97-7 HCAPLUS

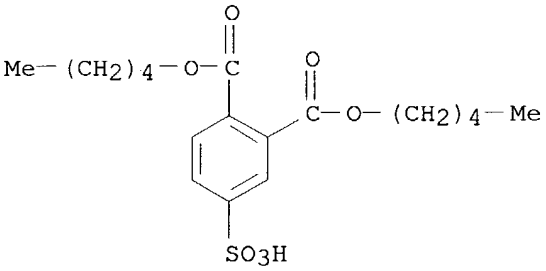
CN 1,2-Benzenedicarboxylic acid, 4-sulfo-, 1,2-didodecyl ester (9CI) (CA INDEX NAME)



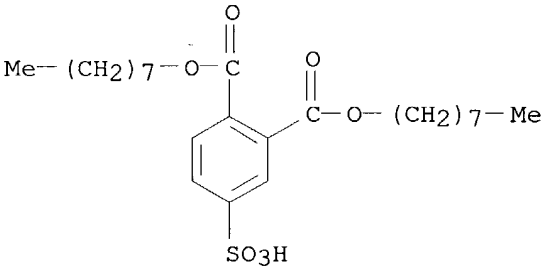
RN 264192-28-1 HCAPLUS
CN 1,2-Benzenedicarboxylic acid, 4-sulfo-, 1,2-bis(2-ethylhexyl) ester (9CI) (CA INDEX NAME)



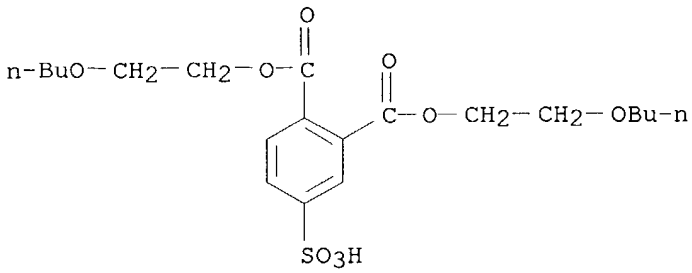
RN 384330-05-6 HCAPLUS
CN 1,2-Benzenedicarboxylic acid, 4-sulfo-, 1,2-dipentyl ester (9CI) (CA INDEX NAME)



RN 384330-06-7 HCAPLUS
CN 1,2-Benzenedicarboxylic acid, 4-sulfo-, 1,2-dioctyl ester (9CI) (CA INDEX NAME)

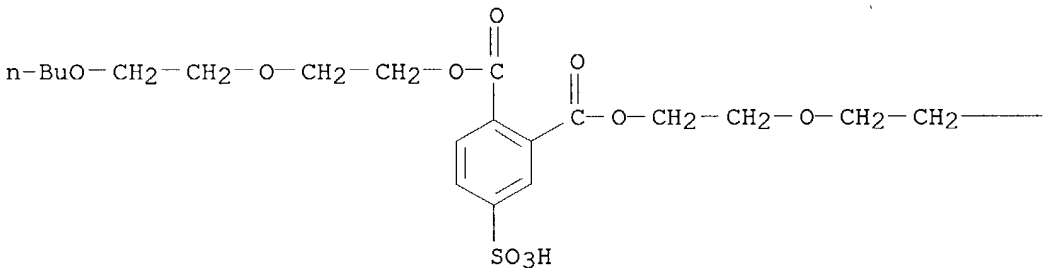


RN 384330-08-9 HCAPLUS
CN 1,2-Benzenedicarboxylic acid, 4-sulfo-, 1,2-bis(2-butoxyethyl) ester (9CI) (CA INDEX NAME)



RN 384330-09-0 HCAPLUS
CN 1,2-Benzenedicarboxylic acid, 4-sulfo-, 1,2-bis[2-(2-butoxyethoxy)ethyl] ester (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B

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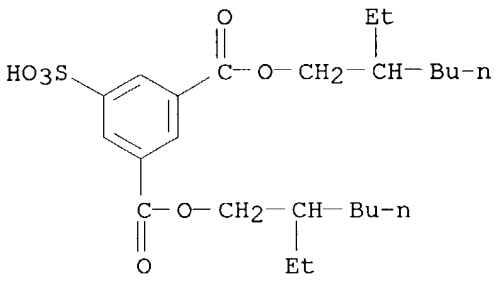
L48 ANSWER 7 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2002:596084 HCAPLUS
DN 137:279846
ED Entered STN: 11 Aug 2002
TI Flexible **polyaniline** of metallic type conductivity obtained via protonation of emeraldine base with 2-ethylhexyl diester of 5-sulfo-i-phthalic acid
AU Zagorska, M.; Kulszewicz-Bajer, I.; Blet, O.; Zawirska, P.; Dufour, B.; Rannou, P.; Pron, A.
CS Faculty of Chemistry, Warsaw University of Technology, Warsaw, 00-664, Pol.
SO Molecular Crystals and Liquid Crystals Science and Technology, Section A: Molecular Crystals and Liquid Crystals (2002), 374, 569-576
CODEN: MCLCE9; ISSN: 1058-725X
PB Taylor & Francis Ltd.
DT Journal
LA English
CC 37-5 (Plastics Manufacture and Processing)
Section cross-reference(s): 76
AB **Polyaniline** doped with 2-ethylhexyl diester of 5-sulfo-i-phthalic acid shows elec. conductivity exceeding 120 S.cm-1 at room temperature which in addition is metallic in character down to 190 K. Due to plasticizing properties of the protonating dopant the polymer exhibits excellent mech. properties.
ST **polyaniline** ethylhexyl sulfoisophthalate elec cond
IT Electric conductivity
(metallic-type conductivity of protonated **polyaniline** containing bis(ethylhexyl) sulfoisophthalate)
IT **Polyanilines**
RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
(metallic-type conductivity of protonated **polyaniline** containing bis(ethylhexyl) sulfoisophthalate)
IT **51307-83-6**
RL: MOA (Modifier or additive use); USES (Uses)
(dopant; metallic-type conductivity of protonated **polyaniline** containing bis(ethylhexyl) sulfoisophthalate)
IT 25233-30-1, **Polyaniline**
RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
(doped; metallic-type conductivity of protonated **polyaniline** containing bis(ethylhexyl) sulfoisophthalate)
RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Beadle, P; Synth Met 1998, V95, P29 HCAPLUS
(2) Dufour, B; Chem Mater in press
(3) Ikkala, O; J Chem Phys 1995, V103, P9855 HCAPLUS
(4) Kohlman, R; Physical Properties of Polymers Handbook 1996, P453 HCAPLUS
(5) Kulszewicz-Bajer, I; Synth Met 1999, V101, P713 HCAPLUS
(6) Kulszewicz-Bajer, I; Synth Met 2000, V114, P125 HCAPLUS
(7) Olinga, T; Macromolecules 2000, V33, P2107 HCAPLUS
(8) Vorel, M; Tschech Patent No 265300 1990
(9) Xia, Y; Chem Mater 1995, V7, P443 HCAPLUS
IT **51307-83-6**
RL: MOA (Modifier or additive use); USES (Uses)
(dopant; metallic-type conductivity of protonated **polyaniline** containing bis(ethylhexyl) sulfoisophthalate)
RN 51307-83-6 HCAPLUS
CN 1,3-Benzenedicarboxylic acid, 5-sulfo-, 1,3-bis(2-ethylhexyl) ester (9CI) (CA INDEX NAME)



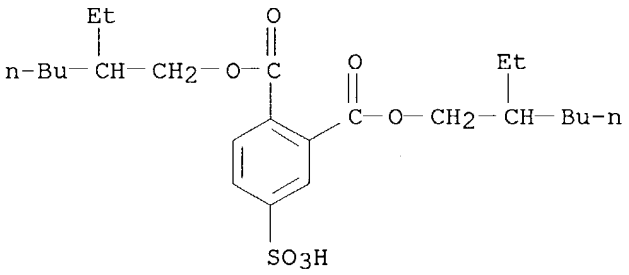
L48 ANSWER 8 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2002:261252 HCAPLUS
DN 137:70873
ED Entered STN: 09 Apr 2002
TI Continuous percolation in organic conducting blends
AU Planes, J.; Bord, S.; Fraysse, J.
CS Laboratoire de Physique des Metaux Synthetiques, Departement de Recherche Fondamentale sur la Matiere Condensee, UMR 5819 CEA-CNRS-Universite Joseph Fourier, CEA-Grenoble, Grenoble, F-38054, Fr.
SO Physica Status Solidi B: Basic Research (2002), 230(1), 289-293
CODEN: PSSBBD; ISSN: 0370-1972
PB Wiley-VCH Verlag Berlin GmbH
DT Journal
LA English
CC 76-1 (Electric Phenomena)
Section cross-reference(s): 36
AB Electronic transport properties of organic conductive blends made of doped poly(aniline) and conventional insulating matrixes exhibit non-standard dependences on temperature T and conducting phase contents p. We propose a new anal. of conductivity data that accounts for the interplay of microscopic mechanisms - essentially hopping - and percolation effects. The continuous percolation scheme allows us to understand the T dependence of the conductivity exponent of percolation. This in turn is responsible for the apparent p dependence of the hopping parameters. It is possible to derive these effective parameters from those of the pure poly(aniline). We thus end up with a closed form formula to fit the whole set of conductivity data $\sigma(p,T)$. The consequences of this anal. are discussed.
ST percolation doped **polyaniline** blend elec cond
IT Conducting polymers
Doping
Electric conductivity
Hopping conductivity
Percolation
(continuous percolation in organic conducting blends)
IT **Polyanilines**
Polymer blends
RL: PRP (Properties)
(continuous percolation in organic conducting blends)
IT 9011-14-7, PMMA 25233-30-1, **Polyaniline**
RL: PRP (Properties)
(continuous percolation in organic conducting blends)
IT **264192-28-1**, 1,2-Benzenedicarboxylic acid, 4-sulfo-, 1,2-bis-(2-ethylhexyl) ester
RL: MOA (Modifier or additive use); USES (Uses)
(dopant; continuous percolation in organic conducting blends)
RE.CNT 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Diurado, D; Synth Met 1999, V101, P803
(2) Fraysse, J; Macromolecules 2001, V34, P8143 HCAPLUS
(3) Fraysse, J; Mol Cryst Liq Cryst 2000, V354, P511 HCAPLUS
(4) Fraysse, J; phys stat sol (b) 2000, V218, P273 HCAPLUS
(5) Olinga, T; Macromolecules 2000, V33, P2107 HCAPLUS
(6) Planes, J; Appl Phys Lett 1999, V75, P1395 HCAPLUS
(7) Planes, J; Appl Phys Lett 2001, V79, P2993 HCAPLUS
(8) Reghu, M; Phys Rev B 1994, V50, P13931 HCAPLUS
(9) Rubin, Z; Phys Rev B 1999, V59, P12196 HCAPLUS
(10) Sheng, P; Phys Rev Lett 1973, V31, P44 HCAPLUS
(11) Shimano, J; Synth Met 2001, V113, P251

(12) Stauffer, D; Introduction to Percolation Theory 1994
(13) Tanaka, H; J Phys: Condens Matter 2000, V12, PR207 HCAPLUS
(14) Travers, J; Synth Met 1999, V101, P359 HCAPLUS
(15) Yang, C; Synth Met 1993, V53, P293 HCAPLUS
(16) Zuppirolli, L; Phys Rev B 1994, V50, P5196

IT **264192-28-1**, 1,2-Benzenedicarboxylic acid, 4-sulfo-, 1,2-bis-(2-ethylhexyl) ester
RL: MOA (Modifier or additive use); USES (Uses)
(dopant; continuous percolation in organic conducting blends)

RN 264192-28-1 HCAPLUS

CN 1,2-Benzenedicarboxylic acid, 4-sulfo-, 1,2-bis(2-ethylhexyl) ester (9CI) (CA INDEX NAME)



L48 ANSWER 9 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2001:769676 HCAPLUS
DN 136:70552
ED Entered STN: 24 Oct 2001
TI Effect of Plasticizing Dopants on Spectroscopic Properties, Supramolecular Structure, and Electrical Transport in Metallic **Polyaniline**
AU Dufour, Bruno; Rannou, Patrice; Fedorko, Pavol; Djurado, David; Travers, Jean-Pierre; Pron, Adam
CS Laboratoire de Physique des Metaux Synthetiques, UMR 5819 CEA-CNRS-Universite J. Fourier-Grenoble I DRFMC CEA-Grenoble, Grenoble, 38054, Fr.
SO Chemistry of Materials (2001), 13(11), 4032-4040
CODEN: CMATEX; ISSN: 0897-4756
PB American Chemical Society
DT Journal
LA English
CC 37-5 (Plastics Manufacture and Processing)
AB Several 1,2-benzenedicarboxylic acid, 4-sulfo, 1,2-di(alkyl), or di(alkoxy) esters were synthesized and tested as plasticizing dopants which lead to solution processible (via counterion) **polyaniline** with improved mech. properties and metallic-type conductivity As evidenced by wide-angle X-ray diffraction and small-angle X-ray scattering studies, PANI doped with the above dopants shows in the solid state a layered type of structural organization with the chain-dopant-chain distance clearly correlated with the length of the alkyl substituent in the dopant. The addition of an external plasticizer of the type of dioctyl phthalate or tritolyl phosphate to PANI doped with the above diesters improves both the mol. ordering and the metallic behavior of the material. The largest range of metallic type of conductivity was found for di-butoxyethyl ester doped-PANI. Solution processibility of PANI can also be improved by the application of a new procedure called "mixed-doping" which involves Bronsted acid doping followed by Lewis acid one.
ST sulfobenzenedicarboxylate plasticizing dopant **polyaniline** property; elec cond sulfobenzenedicarboxylate plasticizing dopant **polyaniline**; dioctyl phthalate plasticizer **polyaniline** property; tritolyl phosphate plasticizer **polyaniline** property
IT Electric conductivity
Plasticizers
Polymer chains
Stress-strain relationship
(effect of sulfobenzenedicarboxylate plasticizing dopant on spectroscopic properties, supramol. structure, and elec. transport in metallic **polyaniline**)
IT **Polyanilines**
RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
(effect of sulfobenzenedicarboxylate plasticizing dopant on spectroscopic properties, supramol. structure, and elec. transport in metallic **polyaniline**)
IT **159467-97-7P 264192-28-1P 384330-05-6P 384330-06-7P 384330-07-8P 384330-08-9P 384330-09-0P**
RL: MOA (Modifier or additive use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(effect of sulfobenzenedicarboxylate plasticizing dopant on spectroscopic properties, supramol. structure, and elec. transport in metallic **polyaniline**)
IT 25233-30-1, **Polyaniline**
RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)

(effect of sulfobenzenedicarboxylate plasticizing dopant on spectroscopic properties, supramol. structure, and elec. transport in metallic **polyaniline**)

IT 89-08-7, 4-Sulfo-1,2-benzenedicarboxylic acid
RL: RCT (Reactant); RACT (Reactant or reagent)
(esterification of)

IT 117-81-7, Bis(2-ethylhexyl) phthalate 1330-78-5, Tritolyl phosphate
RL: MOA (Modifier or additive use); USES (Uses)
(plasticizers; effect of sulfobenzenedicarboxylate plasticizing dopant on spectroscopic properties, supramol. structure, and elec. transport in metallic **polyaniline**)

RE.CNT 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD

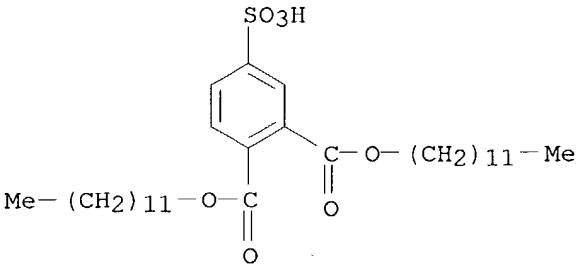
RE

(1) Adams, P; J Phys Condens Matter 1998, V10, P8293 HCAPLUS
(2) Ahlskog, M; Phys Rev B 1997, V55, P6777 HCAPLUS
(3) Berner, D; J Chim Phys (Paris) 1998, V95, P141
(4) Cao, Y; Synth Met 1992, V48, P91 HCAPLUS
(5) Chen, H; Macromolecules 1999, V32, P2967 HCAPLUS
(6) Genoud, F; Chem Mater 2000, V12, P744 HCAPLUS
(7) Hopkins, A; Macromolecules 1996, V29, P7838 HCAPLUS
(8) Ikkala, O; Adv Mater 1999, V11, P1206 HCAPLUS
(9) Ikkala, O; J Chem Phys 1995, V103, P9855 HCAPLUS
(10) Ikkala, O; Macromolecules 1995, V28, P7088 HCAPLUS
(11) Jozefowicz, M; Phys Rev B 1989, V39, P12958 HCAPLUS
(12) Kohlman, R; Physical Properties of Polymers Handbook 1996, P453 HCAPLUS
(13) Kulszewicz-Bajer, I; Chem Mater 1999, V11, P552 HCAPLUS
(14) Kulszewicz-Bajer, I; Synth Met 2001, V119, P343
(15) Levon, K; Polymer 1995, V36, P2733 HCAPLUS
(16) Macdiarmid, A; Synth Met 1994, V65, P103 HCAPLUS
(17) Olinga, T; Macromolecules 2000, V33, P2107 HCAPLUS
(18) Park, Y; Solid State Commun 1988, V65, P147 HCAPLUS
(19) Roncali, J; Handbook of Conducting Polymers 1998, P311
(20) Vikki, T; Macromolecules 1996, V29, P2945 HCAPLUS
(21) Wernet, W; Makromol Chem, Rapid Commun 1984, V5, P157 HCAPLUS
(22) Yoon, C; Phys Rev B 1994, V49, P1085
(23) Zheng, W; Macromol Chem Phys 1995, V196, P2443 HCAPLUS
(24) Zheng, W; Macromolecules 1997, V30, P2953 HCAPLUS

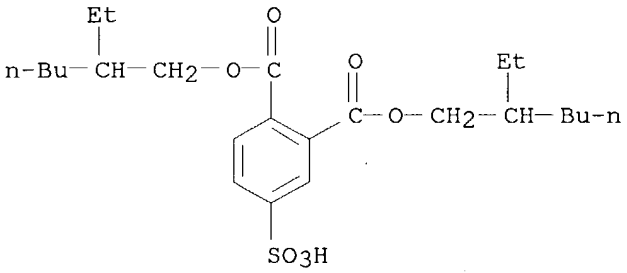
IT **159467-97-7P 264192-28-1P 384330-05-6P 384330-06-7P 384330-07-8P 384330-08-9P 384330-09-0P**
RL: MOA (Modifier or additive use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(effect of sulfobenzenedicarboxylate plasticizing dopant on spectroscopic properties, supramol. structure, and elec. transport in metallic **polyaniline**)

RN 159467-97-7 HCAPLUS

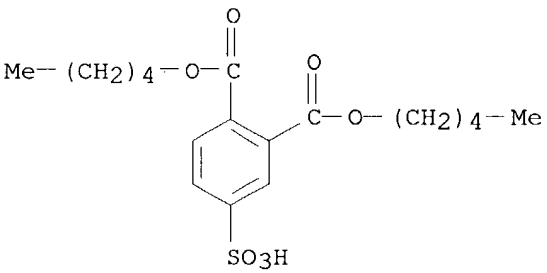
CN 1,2-Benzenedicarboxylic acid, 4-sulfo-, 1,2-didodecyl ester (9CI) (CA INDEX NAME)



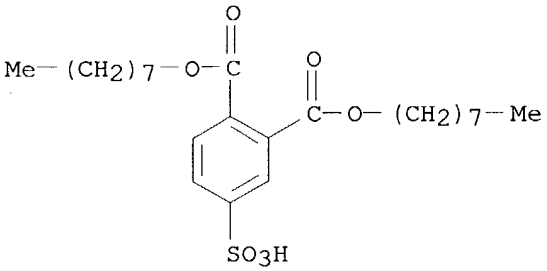
RN 264192-28-1 HCAPLUS
CN 1,2-Benzenedicarboxylic acid, 4-sulfo-, 1,2-bis(2-ethylhexyl) ester (9CI) (CA INDEX NAME)



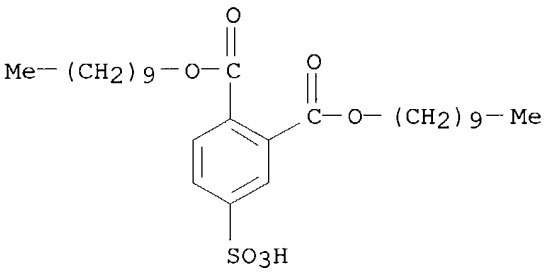
RN 384330-05-6 HCAPLUS
CN 1,2-Benzenedicarboxylic acid, 4-sulfo-, 1,2-dipentyl ester (9CI) (CA INDEX NAME)



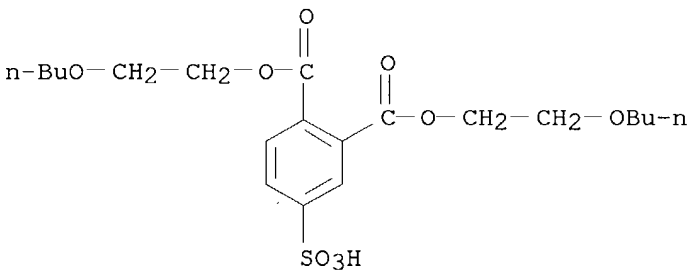
RN 384330-06-7 HCAPLUS
CN 1,2-Benzenedicarboxylic acid, 4-sulfo-, 1,2-dioctyl ester (9CI) (CA INDEX NAME)



RN 384330-07-8 HCAPLUS
CN 1,2-Benzenedicarboxylic acid, 4-sulfo-, 1,2-didecyl ester (9CI) (CA INDEX NAME)

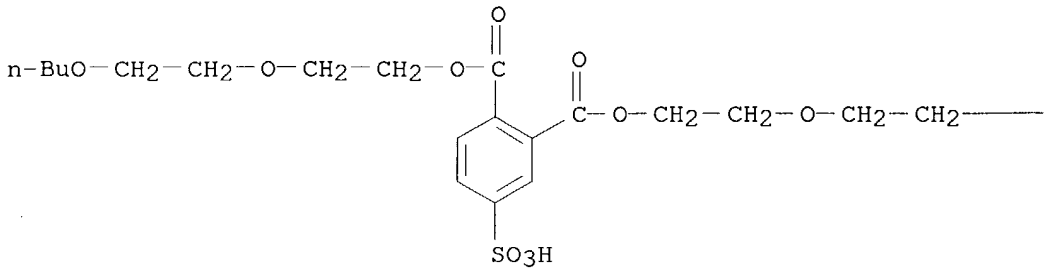


RN 384330-08-9 HCAPLUS
CN 1,2-Benzenedicarboxylic acid, 4-sulfo-, 1,2-bis(2-butoxyethyl) ester (9CI) (CA INDEX NAME)



RN 384330-09-0 HCAPLUS
CN 1,2-Benzenedicarboxylic acid, 4-sulfo-, 1,2-bis[2-(2-butoxyethoxy)ethyl] ester (9CI) (CA INDEX NAME)

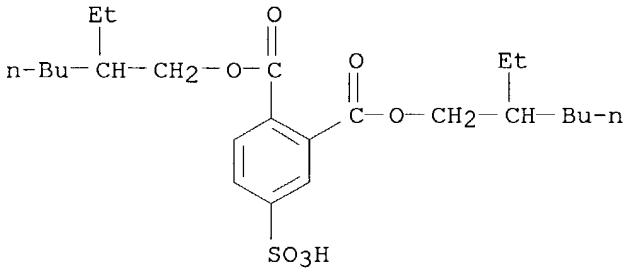
PAGE 1-A



PAGE 1-B

—OBu-n

L48 ANSWER 10 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2001:355968 HCAPLUS
DN 135:108040
ED Entered STN: 18 May 2001
TI New counterion-plasticized **polyaniline** with improved mechanical and thermal properties comparison with PANI-CSA
AU Fedorko, P.; Fraysse, J.; Dufresne, A.; Planes, J.; Travers, J. P.; Olinga, T.; Kramer, C.; Rannou, P.; Pron, A.
CS Laboratoire de Physique des Metaux Synthetique, DRFMC, UMR 5819 CEA-CNRS-UJF, CEA-Grenoble, Grenoble, 38054, Fr.
SO Synthetic Metals (2001), 119(1-3), 445-446
CODEN: SYMEDZ; ISSN: 0379-6779
PB Elsevier Science S.A.
DT Journal
LA English
CC 37-5 (Plastics Manufacture and Processing)
Section cross-reference(s): 76
AB Elec. and mech. properties, as well as conductivity evolution under thermal ageing were investigated in a newly developed **polyaniline** system based on a new multifunctional dopant, bis(2-ethylhexyl) ester of 4-sulfophthalic acid. From comparison with PANI-CSA, it appears that mech. properties and thermal stability are considerably improved while metallic-like conductivity is preserved.
ST mech elec thermal property ethylhexyl sulfophthalate doped **polyaniline**
IT Conducting polymers
Electric conductivity
Heat-resistant materials
(bis(ethylhexyl) sulfophthalate-doped **polyaniline** with improved mech. and thermal properties comparison with PANI-CSA)
IT **Polyanilines**
RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
(bis(ethylhexyl) sulfophthalate-doped **polyaniline** with improved mech. and thermal properties comparison with PANI-CSA)
IT Elongation, mechanical
(breaking; bis(ethylhexyl) sulfophthalate-doped **polyaniline** with improved mech. and thermal properties comparison with PANI-CSA)
IT **264192-28-1**
RL: MOA (Modifier or additive use); USES (Uses)
(bis(ethylhexyl) sulfophthalate-doped **polyaniline** with improved mech. and thermal properties comparison with PANI-CSA)
IT 25233-30-1, **Polyaniline**
RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
(bis(ethylhexyl) sulfophthalate-doped **polyaniline** with improved mech. and thermal properties comparison with PANI-CSA)
RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Beadle, P; Synth Met 1998, V95, P29 HCAPLUS
(2) Cao, Y; Synth Met 1992, V48, P91 HCAPLUS
(3) Nechtschein, M; Synth Met 1987, V18, P311 HCAPLUS
(4) Olinga, T; Macromolecules 2000, V33, P2107 HCAPLUS
IT **264192-28-1**
RL: MOA (Modifier or additive use); USES (Uses)
(bis(ethylhexyl) sulfophthalate-doped **polyaniline** with improved mech. and thermal properties comparison with PANI-CSA)
RN 264192-28-1 HCAPLUS
CN 1,2-Benzenedicarboxylic acid, 4-sulfo-, 1,2-bis(2-ethylhexyl) ester (9CI) (CA INDEX NAME)

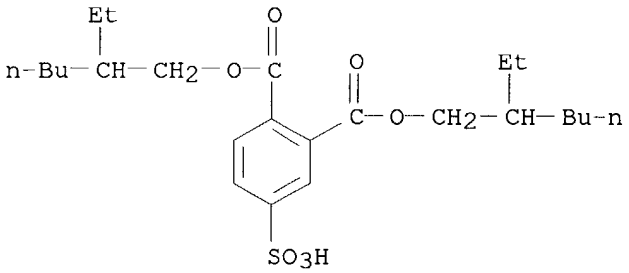


L48 ANSWER 11 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2001:355966 HCAPLUS
DN 135:108099
ED Entered STN: 18 May 2001
TI New PANI/dopant/solvent associations for processing of metallic PANI
AU Rannou, P.; Dufour, B.; Travers, J. P.; Pron, A.
CS 17 rue des Martyrs 38 054, Laboratoire de Physics des Metaux Synthetique/UMR 5819-SPrAM (CEA-CNRS-Univ. J. Fourier)/DRFMC/CEA-Grenoble, Grenoble, Fr.
SO Synthetic Metals (2001), 119(1-3), 441-442
CODEN: SYMEDZ; ISSN: 0379-6779
PB Elsevier Science S.A.
DT Journal
LA English
CC 37-6 (Plastics Manufacture and Processing)
Section cross-reference(s): 76
AB New processing systems are analyzed with the goal of the preparation of doped PANI with improved mech. properties and exhibiting metallic type conductivity Special emphasis is put on the relationship between structural features of the dopant and its ability to induce charge carriers delocalization as probed by UV-Vis-NIR spectroscopy.
ST **polyaniline** sulfonic phosphoric acid diester dopant cond UV absorption
IT Conducting polymers
Dopants
Electric conductivity
(new PANI/dopant/solvent assocns. for processing of metallic PANI)
IT Solvents
(organic; new PANI/dopant/solvent assocns. for processing of metallic PANI)
IT **Polyanilines**
RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
(sulfonic acids and phosphoric acid diesters-doped; new PANI/dopant/solvent assocns. for processing of metallic PANI)
IT 645-15-8, Bis(4-nitrophenyl)hydrogen phosphate 838-85-7, Diphenyl hydrogen phosphate 5872-08-2, DL-Camphor-10-sulfonic acid 35193-63-6, 1,1'-Binaphthyl-2,2'-diyl hydrogen phosphate **264192-28-1**
RL: MOA (Modifier or additive use); USES (Uses)
(dopant; new PANI/dopant/solvent assocns. for processing of metallic PANI)
IT 79-43-6, Dichloroethanoic acid, uses 108-39-4, uses 920-66-1, 1,1,1,3,3,3-Hexafluoro-2-propanol
RL: NUU (Other use, unclassified); USES (Uses)
(solvent; new PANI/dopant/solvent assocns. for processing of metallic PANI)
IT 25233-30-1, **Polyaniline**
RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
(sulfonic acids and phosphoric acid diesters-doped; new PANI/dopant/solvent assocns. for processing of metallic PANI)
RE.CNT 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Adams, P; J Phys: Condens Matter 1998, V10, P8293 HCAPLUS
(2) Beadle, P; Synth Met 1998, V95, P29 HCAPLUS
(3) Cao, Y; Synth Met 1992, V48, P91 HCAPLUS
(4) Cao, Y; Synth Met 1995, V69, P187 HCAPLUS
(5) Ikkala, O; Synth Met 1997, V84, P55 HCAPLUS
(6) MacDiarmid, A; Synth Met 1994, V65, P103 HCAPLUS
(7) MacDiarmid, A; Synth Met 1995, V69, P85 HCAPLUS

(8) Olinga, T; Macromolecules 2000, V33, P2107 HCAPLUS
(9) Pomfret, S; Adv Mater 1998, V10, P135
(10) Rannou, P; Macromolecules 1998, V31, P3007 HCAPLUS
(11) Reghu, M; Handbook of Conducting Polymers 1998, P95
(12) Reghu, M; Phys Rev B 1993, V47, P1758 HCAPLUS
(13) Xia, Y; Chem Mater 1995, V7, P445

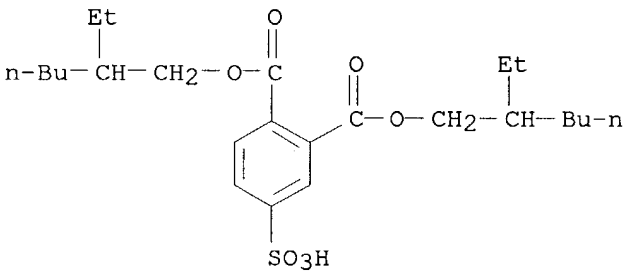
IT **264192-28-1**
RL: MOA (Modifier or additive use); USES (Uses)
(dopant; new PANI/dopant/solvent assocns. for processing of metallic PANI)

RN 264192-28-1 HCAPLUS
CN 1,2-Benzenedicarboxylic acid, 4-sulfo-, 1,2-bis(2-ethylhexyl) ester (9CI) (CA INDEX NAME)



L48 ANSWER 12 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2001:355953 HCAPLUS
DN 135:108033
ED Entered STN: 18 May 2001
TI Lewis acid doping of poly(aniline): processing, spectroscopic and structural consequences
AU Genoud, F.; Kulszewicz-Bajer, I.; Dufour, B.; Rannou, P.; Pron, A.
CS 17 rue des Martyrs 38 054, Laboratoire de Physics des Metaux Synthetiques/UMR 5819-SPrAM(CEA-CNRS-Univ. J. Fourier)/DRFMC/CEA-Grenoble, Grenoble, Fr.
SO Synthetic Metals (2001), 119(1-3), 415-416
CODEN: SYMEDZ; ISSN: 0379-6779
PB Elsevier Science S.A.
DT Journal
LA English
CC 37-5 (Plastics Manufacture and Processing)
Section cross-reference(s): 76
AB Lewis acids such as AlCl3, GaCl3, FeCl3, SnCl4, SbCl5, and others readily complex **polyaniline** (PANI) on both imine and amine nitrogens rendering this polymer soluble in nitromethane and acetonitrile i.e. solvents which dissolve neither base nor protonated (Bronsted acid doped) form of PANI. Films of Lewis acid doped PANI show distinctly different spectral features from those reported for protonated PANI. They are also less conductive (typical conductivity 10-2-10-3 S.cm-1). Mixed PANI doping (Bronsted acid doping followed by the Lewis acid one) leads to a polymer with improved solution processibility and conductivity comparable to that of protonated PANI.
ST Lewis acid doping **polyaniline** processability; Bronsted Lewis acid combined doping **polyaniline** property; antimony chloride doping **polyaniline** property; tin chloride doping **polyaniline** property; iron chloride doping **polyaniline** property; gallium chloride doping **polyaniline** property; aluminum chloride doping **polyaniline** property; spectra Lewis acid doped **polyaniline**
IT Conducting polymers
Electric conductivity
Mossbauer effect
(Lewis acid doping of poly(aniline): processing, spectroscopic and structural consequences)
IT Lewis acids
RL: MOA (Modifier or additive use); PRP (Properties); USES (Uses)
(Lewis acid doping of poly(aniline): processing, spectroscopic and structural consequences)
IT **Polyanilines**
RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
(with emeraldine structure; Lewis acid doping of poly(aniline): processing, spectroscopic and structural consequences)
IT 7446-70-0, Aluminum chloride, properties 7646-78-8, Tin tetrachloride, properties 7647-18-9, Antimony pentachloride 7705-08-0, Ferric chloride, properties 13450-90-3, Gallium chloride
RL: MOA (Modifier or additive use); PRP (Properties); USES (Uses)
(Lewis acid doping of poly(aniline): processing, spectroscopic and structural consequences)
IT **264192-28-1**
RL: MOA (Modifier or additive use); PRP (Properties); USES (Uses)
(Lewis acid-Bronsted acid doping of poly(aniline): processing,

spectroscopic and structural consequences)
IT 25233-30-1, **Polyaniline**
RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
(with emeraldine structure; Lewis acid doping of poly(aniline): processing, spectroscopic and structural consequences)
RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Beadle, P; Synth Met 1998, V95, P29 HCAPLUS
(2) Cao, Y; Synth Met 1992, V48, P48
(3) Genoud, F; Chem Mater 2000, V12, P744 HCAPLUS
(4) Herber, R; Physica 1980, V99B, P352
(5) Ikkala, O; Synth Met 1997, V84, P55 HCAPLUS
(6) Kulszewicz-Bajer, I; Chem Mater 1999, V11, P552 HCAPLUS
(7) Olinga, T; Macromolecules 2000, V32, P2107
(8) Yang, C; Chem Mater 1991, V3, P878 HCAPLUS
(9) Zheng, W; Macromolecules 1997, V30, P2953 HCAPLUS
IT **264192-28-1**
RL: MOA (Modifier or additive use); PRP (Properties); USES (Uses)
(Lewis acid-Bronsted acid doping of poly(aniline): processing, spectroscopic and structural consequences)
RN 264192-28-1 HCAPLUS
CN 1,2-Benzenedicarboxylic acid, 4-sulfo-, 1,2-bis(2-ethylhexyl) ester (9CI) (CA INDEX NAME)



L48 ANSWER 13 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2001:355780 HCAPLUS
DN 135:108007
ED Entered STN: 18 May 2001
TI **Polyaniline** doped with esters of 5-sulfo-i-phthalic acid and its blends with nonconducting polymers
AU Kulszewicz-Bajer, I.; Zagorska, M.; Rozalska, I.
CS Faculty of Chemistry, Noakowskiego 3, Warsaw University of Technology, Warsaw, 00-664, Pol.
SO Synthetic Metals (2001), 119(1-3), 69-70
CODEN: SYMEDZ; ISSN: 0379-6779
PB Elsevier Science S.A.
DT Journal
LA English
CC 37-5 (Plastics Manufacture and Processing)
Section cross-reference(s): 73, 76
AB **Polyaniline** doped with esters of 5-sulfo-i-phthalic acid is soluble in several solvents as chloroform, hexafluoro-2-propanol and dichloroacetic acid. In selected cases studied the solution spectra of the doped polymer are concentration dependent. Concentrated solns. give spectra characteristics of delocalized polarons whereas in diluted solns. features characteristic of localized polarons are observed The conducting blends of ester doped **polyaniline** with polyacrylates, polyurethanes and polyamide 6 have been obtained.
ST sulfoisophthalate doped **polyaniline** absorption spectra elec cond; polycaprolactam **polyaniline** blend
IT **Polyanilines**
RL: PRP (Properties)
(UV-visible-near IR spectra of sulfoisophthalate-doped **polyanilines**)
IT Polyamides, properties
RL: PRP (Properties)
(blends with sulfoisophthalate-doped **polyaniline**; elec. conductivity and UV-visible-near IR spectra of)
IT IR spectra
(near-IR; of sulfoisophthalate-doped **polyanilines**)
IT Doping
(of **polyaniline** with sulfoisophthalates)
IT Electric conductivity
(of sulfoisophthalate-doped **polyaniline**/polycaprolactam blends)
IT UV and visible spectra
(of sulfoisophthalate-doped **polyanilines**)
IT Polymer blends
RL: PRP (Properties)
(sulfoisophthalate-doped **polyaniline**/polycaprolactam; elec. conductivity and UV-visible-near IR spectra of)
IT 22326-31-4, 5-Sulfoisophthalic acid **178374-58-8**, Bis(2-butoxy-2-ethoxyethyl) 5-sulfoisophthalate
RL: MOA (Modifier or additive use); USES (Uses)
(UV-visible-near IR spectra of sulfoisophthalate-doped **polyanilines**)
IT 25233-30-1, **Polyaniline**
RL: PRP (Properties)
(UV-visible-near IR spectra of sulfoisophthalate-doped **polyanilines**)
IT 25038-54-4, Polycaprolactam, properties
RL: PRP (Properties)

(blends with sulfoisophthalate-doped **polyaniline**; elec. conductivity and UV-visible-near IR spectra of)

IT 79-43-6, Dichloroacetic acid, uses
RL: NUU (Other use, unclassified); USES (Uses)
(solvent; UV-visible-near IR spectra of sulfoisophthalate-doped **polyanilines** in)

RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

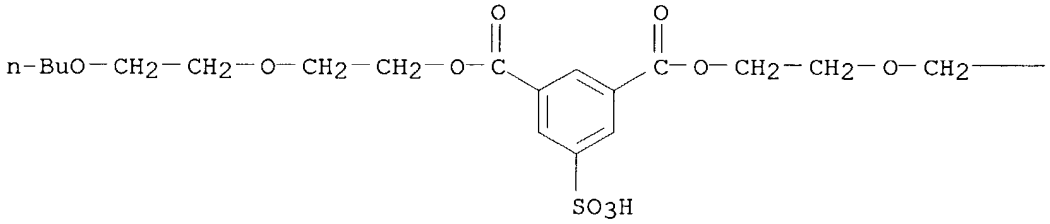
(1) Beadle, P; Synth Met 1998, V95, P29 HCAPLUS
(2) Cao, Y; Synth Met 1992, V48, P91 HCAPLUS
(3) Chan, H; Macromolecules 1994, V27, P2159 HCAPLUS
(4) Kulszewicz-Bajer, I; Synth Met 1999, V101, P713 HCAPLUS
(5) Pron, A; Synth Met 1993, V55-57, P3520
(6) Vorel, M; Tschech Patent No 265300 1990

IT **178374-58-8**, Bis(2-butoxy-2-ethoxyethyl) 5-sulfoisophthalate
RL: MOA (Modifier or additive use); USES (Uses)
(UV-visible-near IR spectra of sulfoisophthalate-doped **polyanilines**)

RN 178374-58-8 HCAPLUS

CN 1,3-Benzenedicarboxylic acid, 5-sulfo-, 1,3-bis[2-(2-butoxyethoxy)ethyl] ester (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B

—CH2—OBu-n

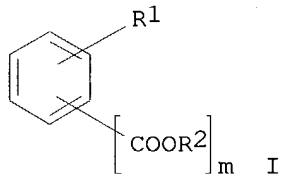
L48 ANSWER 14 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2001:50938 HCAPLUS
DN 134:108998
ED Entered STN: 19 Jan 2001
TI Use of sulphonic and phosphonic acids as dopants of conductive **polyaniline** films and conductive composite materials based on **polyaniline**
IN Olinga, Thomas; Pron, Adam; Travers, Jean-Pierre
PA Commissariat a l'Energie Atomique, Fr.; Centre National de la Recherche Scientifique
SO PCT Int. Appl., 37 pp.
CODEN: PIXXD2
DT Patent
LA French
IC ICM H01B001-12
CC 76-2 (Electric Phenomena)
Section cross-reference(s): 38

applicant

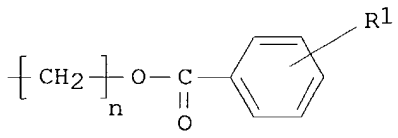
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001004910	A1	20010118	WO 2000-FR2017	20000712
	W: JP, US				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	FR 2796379	A1	20010119	FR 1999-9088	19990713
	FR 2796379	B1	20020524		
	EP 1194932	A1	20020410	EP 2000-951662	20000712
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	JP 2003504459	T2	20030204	JP 2001-509048	20000712
PRAI	FR 1999-9088	A	19990713		
	WO 2000-FR2017	W	20000712		

OS MARPAT 134:108998
GI



I



II

AB The invention concerns the use of sulfonic and phosphonic acids functionalized with plasticizing groups as dopants of conductive **polyaniline** films and conductive composite materials based on **polyaniline**. Said acids correspond to formula (I) wherein: R1

represents -SO3H or PO3H2; R2 represents a linear or branched alkyl group; and m is equal to 1 or 2; or R2 is a group of formula (II) wherein: R1 is such as defined in formula (II) and n is an integer ranging between 1 and 16; and m is equal to 1.

ST sulfonic acid dopant conductive **polyaniline** film composite material; phosphonic acid dopant conductive **polyaniline** film composite material

IT Carboxylic acids, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(dicarboxylic, diesters; use of sulfonic and phosphonic acids as dopants of conductive **polyaniline** films and conductive composite materials based on **polyaniline**)

IT Composites
Conducting polymers
(use of sulfonic and phosphonic acids as dopants of conductive **polyaniline** films and conductive composite materials based on **polyaniline**)

IT Sulfonic acids, uses
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(use of sulfonic and phosphonic acids as dopants of conductive **polyaniline** films and conductive composite materials based on **polyaniline**)

IT **Polyanilines**
Polycarbonates, uses
Polyesters, uses
Polyurethanes, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(use of sulfonic and phosphonic acids as dopants of conductive **polyaniline** films and conductive composite materials based on **polyaniline**)

IT 13598-36-2, Phosphonic acid
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(use of sulfonic and phosphonic acids as dopants of conductive **polyaniline** films and conductive composite materials based on **polyaniline**)

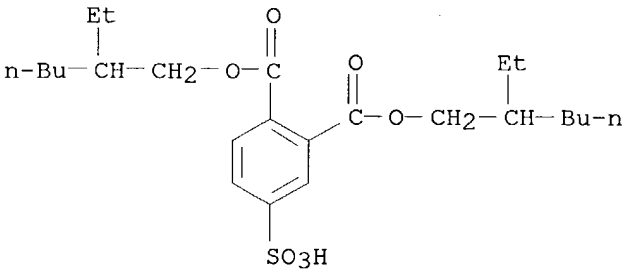
IT 79-43-6, Dichloroacetic acid, reactions 89-08-7, 4-Sulfophthalic acid 104-76-7, 2-Ethyl-1-hexanol
RL: RCT (Reactant); RACT (Reactant or reagent)
(use of sulfonic and phosphonic acids as dopants of conductive **polyaniline** films and conductive composite materials based on **polyaniline**)

IT **264192-28-1P**
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(use of sulfonic and phosphonic acids as dopants of conductive **polyaniline** films and conductive composite materials based on **polyaniline**)

IT 88-99-3D, Phthalic acid, diesters 7664-38-2D, Phosphoric acid, triesters, uses 9002-86-2, Poly(vinyl chloride) 9003-53-6, Polystyrene 9004-34-6D, Cellulose, derivs., uses 9011-14-7, Poly(methyl methacrylate) 25233-30-1, **Polyaniline**
RL: TEM (Technical or engineered material use); USES (Uses)
(use of sulfonic and phosphonic acids as dopants of conductive **polyaniline** films and conductive composite materials based on **polyaniline**)

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE
(1) Cao, Y; SYNTHETIC METALS 1992, V48, P91 HCAPLUS
(2) Commissariat A L'Energie Atomique; WO 9805040 A 1998 HCAPLUS
(3) Ikkala, O; US 5783111 A 1998 HCAPLUS
IT **264192-28-1P**
RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(use of sulfonic and phosphonic acids as dopants of conductive **polyaniline** films and conductive composite materials based on **polyaniline**)
RN 264192-28-1 HCAPLUS
CN 1,2-Benzenedicarboxylic acid, 4-sulfo-, 1,2-bis(2-ethylhexyl) ester (9CI) (CA INDEX NAME)



L48 ANSWER 15 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2000:456301 HCAPLUS
DN 133:208656
ED Entered STN: 07 Jul 2000
TI Esters of 5-sulfo-i-phthalic acid as new dopants improving the solution processibility of **polyaniline**: spectroscopic, structural and transport properties of the doped polymer
AU Kulszewicz-Bajer, I.; Zagorska, M.; Niziol, J.; Pron, A.; Luzny, W.
CS Faculty of Chemistry, Warsaw University of Technology, Warsaw, 00-664, Pol.
SO Synthetic Metals (2000), 114(2), 125-131
CODEN: SYMEDZ; ISSN: 0379-6779
PB Elsevier Science S.A.
DT Journal
LA English
CC 37-6 (Plastics Manufacture and Processing)
Section cross-reference(s): 73, 76
AB Three esters of 5-sulfoisophthalic acid, namely di(n-amyl), bis(2-butoxyethyl) (BESIP), and bis(2-butoxy-2-ethoxyethyl) (BEESIP) 5-sulfoisophthalates, were synthesized and tested as **polyaniline** (PANI) doping agents with the goal of improving its solution processibility. PANI protonated with these acidic esters is soluble in chloroform, di-Et ketone, hexafluoro-2-propanol, m-cresol, and dichloroacetic acid (DCAA). Solns. of PANI(BESIP)0.5 in DCAA are especially interesting because their spectra are strongly concentration-dependent, showing a change in polymer conformation upon dilution The spectra of dilute solns. exhibit features characteristic of the conformation that favors localized charge carriers, whereas with increasing polymer concentration, features ascribed to delocalized charge carriers begin to dominate the spectrum. Diffractograms of PANI(BESIP)0.5 and PANI(BEESIP)0.5 films cast from DCAA, in addition to a broad amorphous halo, show a sharp Bragg reflection at low angles ($2\theta = 2\text{-}4^\circ$), which is indicative of self-organized supramol. structures previously observed for other polyelectrolyte-like systems with amphiphilic counterions. The highest conductivity (85 S/cm at RT) was obtained for PANI(BESIP)0.5.
ST **polyaniline** dopant sulfoisophthalate ester
IT Polymer chains
(conformation; of **polyaniline** containing sulfoisophthalate ester dopants)
IT **Polyanilines**
RL: PRP (Properties)
(esters of sulfoisophthalic acid as dopants for improving solution processibility of)
IT Electric conductivity
UV and visible spectra
(of **polyaniline** containing sulfoisophthalate ester dopants)
IT **178374-58-8P**, Bis(2-butoxy-2-ethoxyethyl) 5-sulfoisophthalate **241147-16-0P**, Dipentyl 5-sulfoisophthalate **241147-18-2P**, Bis(2-butoxyethyl) 5-sulfoisophthalate
RL: MOA (Modifier or additive use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(dopants for improving solution processibility of **polyaniline**)
IT 25233-30-1, **Polyaniline**
RL: PRP (Properties)
(esters of sulfoisophthalic acid as dopants for improving solution processibility of)
RE.CNT 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE

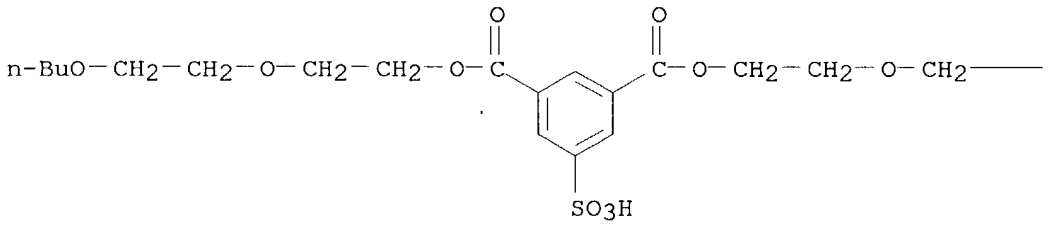
(1) Adams, P; J Phys Condens Matter 1998, V10, P8293 HCAPLUS
(2) Anon; US 5583 1996
(3) Beadle, P; Synth Met 1998, V95, P29 HCAPLUS
(4) Cao, Y; Synth Met 1992, V48, P91 HCAPLUS
(5) Chen, H; Macromolecules 1999, V32, P2967 HCAPLUS
(6) Hopkins, A; Macromolecules 1996, V29, P7838 HCAPLUS
(7) Hopkins, A; Synth Met 1998, V97, P47 HCAPLUS
(8) Ikkala, O; J Chem Phys 1995, V103, P9855 HCAPLUS
(9) Ikkala, O; Macromolecules 1995, V28, P7988
(10) Kivelson, S; Synth Met 1990, V22, P371
(11) Kulszewicz-Bajer, I; Synth Met 1999, V101, P713 HCAPLUS
(12) Lacko, V; Tschech Patent No 127993 1968
(13) Larkin, A; Sov Phys JETP 1982, V56, P657
(14) Lu, W; Handbook of Conducting Polymers 1998, P881
(15) Niziol, J; to be published
(16) Rannou, P; Macromolecules 1998, V31, P3007 HCAPLUS
(17) Reghu, M; Phys Rev B 1993, V48, P17685
(18) Vikki, T; Macromolecules 1996, V29, P2945 HCAPLUS
(19) Vorel, M; Tschech Patent No 265300 1990
(20) Wernet, W; Mackromol Chem, Rapid Commun 1984, V1, P151
(21) Xia, Y; Chem Mater 1995, V7, P443 HCAPLUS
(22) Zeng, W; Macromolecules 1997, V30, P2953
(23) Zheng, W; Makromol Chem Phys 1995, V196, P2443 HCAPLUS
(24) Zuppiroli, L; Phys Rev B 1994, V50, P5196 HCAPLUS

IT **178374-58-8P**, Bis(2-butoxy-2-ethoxyethyl) 5-sulfoisophthalate **241147-16-0P**, Dipentyl 5-sulfoisophthalate **241147-18-2P**, Bis(2-butoxyethyl) 5-sulfoisophthalate
RL: MOA (Modifier or additive use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(dopants for improving solution processibility of **polyaniline**)

RN 178374-58-8 HCAPLUS

CN 1,3-Benzenedicarboxylic acid, 5-sulfo-, 1,3-bis[2-(2-butoxyethoxy)ethyl] ester (9CI) (CA INDEX NAME)

PAGE 1-A

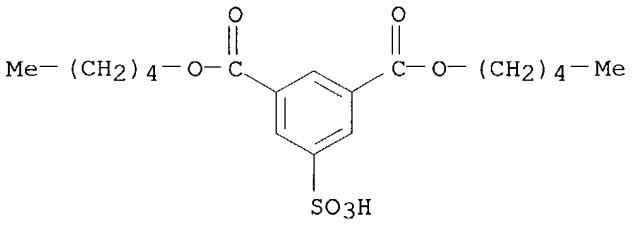


PAGE 1-B

—CH2—OBu-n

RN 241147-16-0 HCAPLUS

CN 1,3-Benzenedicarboxylic acid, 5-sulfo-, 1,3-dipentyl ester (9CI) (CA INDEX NAME)



RN 241147-18-2 HCAPLUS
CN 1,3-Benzenedicarboxylic acid, 5-sulfo-, 1,3-bis(2-butoxyethyl) ester (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

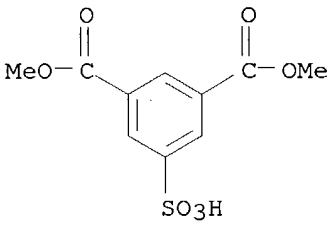
L48 ANSWER 16 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2000:240761 HCAPLUS
DN 132:266599
ED Entered STN: 14 Apr 2000
TI Anticorrosive primer composition
IN Uno, Keiichi; Yutani, Yuji; Tachimori, Hiroshi; Kamo, Hiroaki; Hotta, Yasunari; Togawa, Keiichiro
PA Toyo Boseki Kabushiki Kaisha, Japan
SO Eur. Pat. Appl., 20 pp.
CODEN: EPXXDW
DT Patent
LA English
IC ICM C09D005-08
CC 42-12 (Coatings, Inks, and Related Products)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 992548	A2	20000412	EP 1999-119907	19991008
	EP 992548	A3	20010912		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	JP 2000119599	A2	20000425	JP 1998-288365	19981009
	JP 2001064587	A2	20010313	JP 1999-237487	19990824
PRAI	JP 1998-288365	A	19981009		
	JP 1999-237487	A	19990824		

AB A primer coating composition comprises composite structural particles of an elec. conductive polymer and an inorg. oxide with stable dispersion in any aqueous, organic solvent, and mixed solvent systems without any dopant or surfactant. Thus, a primer composition was prepared from doped **polyaniline** (prepared from diester, obtained from di-Me 5-sulfoisophthalate Na salt and diethylene glycol monobutyl ether 8.34, H2O 80, H2SO4 2.022, aniline 1.863, ammonium peroxosulfate 4.564 g dissolved in 20 g H2O) 2.5, Vylon resin RV-290 8.3, Sumimal M40S 1.7, orthophosphoric acid 0.4, TiO2 12.5, and cyclohexanone 74.6 parts.
ST conductive polymer inorg oxide coating anticorrosion; composite inorg oxide stable dispersion coating anticorrosion; **polyaniline** doped phosphoric acid Sumimal Vylon coating
IT Silica gel, uses
RL: MOA (Modifier or additive use); USES (Uses)
(Sylysia 350; primer coating composition containing elec. conductive polymer and
inorg. oxide on steel for anticorrosion)
IT Coating materials
Primers (paints)
(anticorrosive; primer coating composition containing elec. conductive polymer
and inorg. oxide on steel for anticorrosion)
IT Particles
(composites; primer coating composition containing elec. conductive polymer and
inorg. oxide on steel for anticorrosion)
IT Polymerization
(oxidative; primer coating composition containing elec. conductive polymer and
inorg. oxide on steel for anticorrosion)
IT Composites
(particles; primer coating composition containing elec. conductive polymer and

inorg. oxide on steel for anticorrosion)
IT Conducting polymers
Corrosion inhibitors
Crosslinking agents
Polymerization
(primer coating composition containing elec. conductive polymer and inorg. oxide
on steel for anticorrosion)
IT Phenolic resins, uses
Phosphorus acids
Polyvinyl butyrals
Sulfonic acids, uses
RL: MOA (Modifier or additive use); USES (Uses)
(primer coating composition containing elec. conductive polymer and inorg. oxide
on steel for anticorrosion)
IT Metals, miscellaneous
RL: MSC (Miscellaneous)
(primer coating composition containing elec. conductive polymer and inorg. oxide
on steel for anticorrosion)
IT Epoxy resins, uses
Oxides (inorganic), uses
RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(primer coating composition containing elec. conductive polymer and inorg. oxide
on steel for anticorrosion)
IT Polyesters, uses
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(topcoating; primer coating composition containing elec. conductive polymer and
inorg. oxide on steel for anticorrosion)
IT Coating materials
(topcoats, polyesters; primer coating composition containing elec. conductive
polymer and inorg. oxide on steel for anticorrosion)
IT 7631-86-9, Snowtex, uses
RL: MOA (Modifier or additive use); USES (Uses)
(Snowtex colloidal; primer coating composition containing elec. conductive polymer and inorg. oxide on steel for anticorrosion)
IT 25233-30-1DP, **Polyaniline**, doped 138511-66-7P 263361-12-2P, Vylon RV-290-Sumimal M40S copolymer 263361-13-3P 263361-14-4P 263361-15-5P
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(primer coating composition containing elec. conductive polymer and inorg. oxide
on steel for anticorrosion)
IT 7664-38-2, Orthophosphoric acid, uses 10343-62-1, Metaphosphoric acid 13463-67-7, Titanium oxide, uses 29196-72-3, Aluminum tripolyphosphate
RL: MOA (Modifier or additive use); USES (Uses)
(primer coating composition containing elec. conductive polymer and inorg. oxide
on steel for anticorrosion)

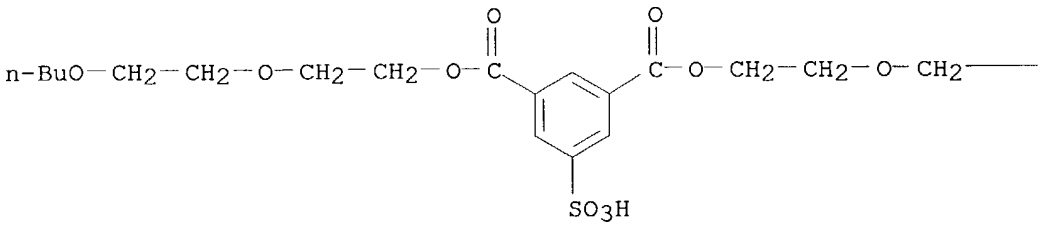
IT 12597-69-2, Steel, miscellaneous
RL: MSC (Miscellaneous)
(primer coating composition containing elec. conductive polymer and inorg. oxide
on steel for anticorrosion)
IT 112-34-5, Diethylene glycol monobutyl ether **3965-55-7**, Dimethyl 5-sulfoisophthalate sodium salt 7664-93-9, Sulfuric acid, reactions 7727-54-0 **176236-30-9**
RL: RCT (Reactant); RACT (Reactant or reagent)
(primer coating composition containing elec. conductive polymer and inorg. oxide
on steel for anticorrosion)
IT 138511-63-4P 247225-57-6P, DA-350-dimethyl terephthalate-dimethyl isophthalate-5-sufoisophthalic acid sodium salt-ethylene glycol copolymer 263361-11-1P
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(topcoats; primer coating composition containing elec. conductive polymer and
inorg. oxide on steel for anticorrosion)
IT **3965-55-7**, Dimethyl 5-sulfoisophthalate sodium salt **176236-30-9**
RL: RCT (Reactant); RACT (Reactant or reagent)
(primer coating composition containing elec. conductive polymer and inorg. oxide
on steel for anticorrosion)
RN 3965-55-7 HCAPLUS
CN 1,3-Benzenedicarboxylic acid, 5-sulfo-, 1,3-dimethyl ester, sodium salt (9CI) (CA INDEX NAME)



● Na

RN 176236-30-9 HCAPLUS
CN 1,3-Benzenedicarboxylic acid, 5-sulfo-, 1,3-bis[2-(2-butoxyethoxy)ethyl] ester, sodium salt (9CI) (CA INDEX NAME)

PAGE 1-A



● Na

PAGE 1-B

— CH_2 — OBu-n

L48 ANSWER 17 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2000:142773 HCAPLUS
DN 132:294519
ED Entered STN: 03 Mar 2000
TI Highly Conducting and Solution-Processable **Polyaniline** Obtained via Protonation with a New Sulfonic Acid Containing Plasticizing Functional Groups
AU Olinga, Thomas E.; Fraysse, Jerome; Travers, Jean Pierre; Dufresne, Alain; Pron, Adam
CS Laboratoire des Metaux Synthetiques, UMR 5819 DRFMC CEA Grenoble, Grenoble, 38054, Fr.
SO Macromolecules (2000), 33(6), 2107-2113
CODEN: MAMOBX; ISSN: 0024-9297
PB American Chemical Society
DT Journal
LA English
CC 37-6 (Plastics Manufacture and Processing)
Section cross-reference(s): 38, 76
AB New solution processing systems were studied to obtain highly conductive **polyaniline** (PANI) films with good mech. properties and its conducting blends with poly(Me methacrylate). A new dopant, namely, 1,2-benzenedicarboxylic acid, 4-sulfo, 1,2-di(2-ethylhexyl) ester (DEHEPSA), was studied as a protonating agent. The use of this dopant together with dichloroacetic acid (DCAA) or difluorochloroacetic acid (DFCAA) as solvents leads to films showing conductivities of 180 and 100 S/cm, resp. Films cast from DCAA are metallic in character down to 220° K. Since the protonation agent used exhibits doping as well as plasticizing properties, the resulting **polyaniline** films, in addition to high conductivity, show excellent flexibility and much lower glass transition temperature, Tg, (280° K), compared to **polyaniline** doped with other protonating agents, also, the same processing system can be used for the fabrication of **polyaniline**-poly(Me methacrylate) blends with low percolation threshold («1% of PANI). Upon casting, the overwhelming majority of the solvent can be efficiently removed from the polymer matrix, where the remaining residual solvent is strongly bound to the polymer matrix. For this reason, the resulting blends do not show the disadvantages of the blends cast from m-cresol which release the residual solvent upon aging.
ST **polyaniline** doped elec conducting film; PMMA blend elec conducting film; phthalosulfonate diethylhexyl dopant **polyaniline** ; mech loss **polyaniline** conducting film
IT **Polyanilines**
RL: POF (Polymer in formulation); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(diethylhexyl phthalosulfonate-doped; solution-processable **polyaniline** obtained via protonation with a new sulfonic acid containing plasticizing functional groups for films with high conductivity and good mech. properties)
IT Films
Films
(elec. conductive; solution-processable **polyaniline** obtained via protonation with a new sulfonic acid containing plasticizing functional groups for films with high conductivity and good mech. properties)
IT Electric conductors
Electric conductors
(films; solution-processable **polyaniline** obtained via protonation with a new sulfonic acid containing plasticizing functional

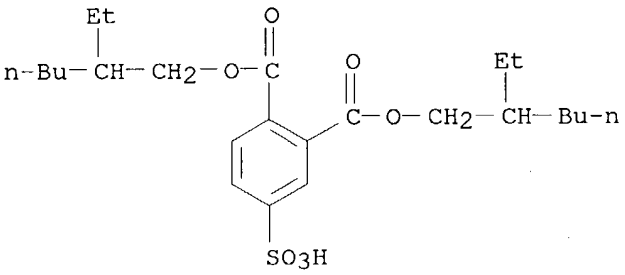
groups for films with high conductivity and good mech. properties)
IT Electric conductivity
(of solution-processable **polyaniline** (blended) films)
IT Mechanical loss
(of solution-processable **polyaniline** films)
IT Polymer blends
RL: PRP (Properties)
(poly(aniline)-PMMA; solution-processable **polyaniline** obtained via protonation with a new sulfonic acid containing plasticizing functional groups for films with high conductivity and good mech. properties)
IT Conducting polymers
(solution-processable **polyaniline** obtained via protonation with a new sulfonic acid containing plasticizing functional groups for films with high conductivity and good mech. properties)
IT 25233-30-1P, Poly(aniline)
RL: POF (Polymer in formulation); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(diethylhexyl phthalosulfonate-doped; solution-processable **polyaniline** obtained via protonation with a new sulfonic acid containing plasticizing functional groups for films with high conductivity and good mech. properties)
IT **264192-28-1P**
RL: MOA (Modifier or additive use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(dopant; solution-processable **polyaniline** obtained via protonation with a new sulfonic acid containing plasticizing functional groups for films with high conductivity and good mech. properties)
IT 9011-14-7, Poly(methyl methacrylate)
RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
(poly(aniline) blends; solution-processable **polyaniline** obtained via protonation with a new sulfonic acid containing plasticizing functional groups for films with high conductivity and good mech. properties)
IT 89-08-7, 4-Sulfophthalic acid
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction with ethylhexanol; preparation of plasticizing dopant for poly(aniline))
IT 104-76-7, 2-Ethyl-1-hexanol
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction with sulfophthalic acid; preparation of plasticizing dopant for poly(aniline))
IT 79-43-6, Dichloroacetic acid, uses 354-19-8, Dichlorofluoroacetic acid
RL: NUU (Other use, unclassified); USES (Uses)
(solvent; solution-processable **polyaniline** obtained via protonation with a new sulfonic acid containing plasticizing functional groups for films with high conductivity and good mech. properties)
RE.CNT 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Abell, L; Synth Met 1997, V84, P127 HCAPLUS
(2) Adams, P; Phys Condens Matter 1998, V10, P8293 HCAPLUS
(3) Aharony, A; Introduction to Percolation Theory 1993
(4) Angelopoulos, M; Synth Met 1987, V21, P21 HCAPLUS
(5) Banerjee, P; Macromolecules 1995, V28, P3940 HCAPLUS
(6) Beadle, P; Synth Met 1998, V95, P29 HCAPLUS
(7) Cao, Y; Synth Met 1992, V48, P91 HCAPLUS
(8) Cao, Y; Synth Met 1995, V69, P187 HCAPLUS
(9) Gamet, D; unpublished results 1999
(10) Ikkala, O; J Chem Phys 1995, V103, P9855 HCAPLUS

(11) Juvin, P; J Appl Polym Sci 1999, V74, P471 HCAPLUS
(12) Kohlman, R; Handbook of Conducting Polymers, 2nd ed 1998, P85
(13) Kohlman, R; Physical Properties of Polymers Handbook 1996, P453 HCAPLUS
(14) Kulszewicz-Bajer, I; Synth Met 1999, V101, P713 HCAPLUS
(15) MacDiarmid, A; Synth Met 1994, V65, P103 HCAPLUS
(16) MacDiarmid, A; Synth Met 1995, V69, P85 HCAPLUS
(17) Pron, A; J Appl Polym Sci 1997, V63, P971 HCAPLUS
(18) Pron, A; Polymer 1993, V34, P4235 HCAPLUS
(19) Rannou, P; Macromolecules 1998, V31, P3007 HCAPLUS
(20) Reghu, M; Phys Rev B 1993, V48, P17685
(21) Reghu, M; Phys Rev B 1994, V50, P13931 HCAPLUS
(22) Travers, J; Synth Met 1987, V21, P135 HCAPLUS
(23) Vikki, T; Macromolecules 1996, V29, P2945 HCAPLUS
(24) Xia, Y; Chem Mater 1995, V7, P443 HCAPLUS

IT **264192-28-1P**
RL: MOA (Modifier or additive use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(dopant; solution-processable **polyaniline** obtained via protonation with a new sulfonic acid containing plasticizing functional groups for films with high conductivity and good mech. properties)

RN 264192-28-1 HCAPLUS

CN 1,2-Benzenedicarboxylic acid, 4-sulfo-, 1,2-bis(2-ethylhexyl) ester (9CI) (CA INDEX NAME)



L48 ANSWER 18 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1999:697921 HCAPLUS
DN 131:300437
ED Entered STN: 02 Nov 1999
TI Electrically conductive laminates with good antistatic property at low humidity
IN Abe, Kazuhiro; Ohase, Shigeji; Kamo, Hiroaki
PA Toyobo Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 13 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM B32B027-30
ICS B32B027-18
CC 38-3 (Plastics Fabrication and Uses)
Section cross-reference(s): 76
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 11300903	A2	19991102	JP 1998-129602	19980422
PRAI JP 1998-129602		19980422		

AB The laminates, useful for magnetic tapes, trays, carrier tapes, packages for electronic appliances, etc., comprise inorg. and/or organic substrates laminated with elec. conductive layer composed of π-conjugated elec. conductive polymers and modified acrylic polymers at ≥1 side. Thus, a monoaxially stretched PET film containing 4000 ppm 0.5-μm CaCO3 was coated with a composition containing an acrylic polyester graft copolymer (prepared from di-Me isophthalate-dimethyl terephthalate-ethylene glycol-fumaric acid-3-methyl-1,5-pentanediol copolymer, styrene, Me methacrylate, 2-hydroxyethyl acrylate, and acrylamidomethylpropanesulfonic acid), 2-aminoanisole-4-sulfonic acid homopolymer, and Emulgen 810 and transverse stretched to give a biaxially stretched film with high transparency of the coating layer under keeping the characteristics of the substrate film, e.g., good resistance to water, solvents, and heat.
ST elec conductor laminate sulfonated **polyaniline** antistatic coating; acrylic graft polyester antistatic coating laminate; polyester film elec conductor coating; water solvent heat resistance antistatic coating
IT Polyesters, uses
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(acrylic, graft; elec. conductive laminates with good antistatic property at low humidity)
IT Polyurethanes, uses
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(acrylic-polyester-, graft; elec. conductive laminates with good antistatic property at low humidity)
IT Polyesters, uses
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(acrylic-polyurethane-, graft; elec. conductive laminates with good antistatic property at low humidity)
IT Epoxy resins, uses
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(acrylic; elec. conductive laminates with good antistatic property at

low humidity)

IT Coating materials
(antistatic; elec. conductive laminates with good antistatic property at low humidity)

IT Conducting polymers
(elec. conductive coating containing; elec. conductive laminates with good antistatic property at low humidity)

IT **Polyanilines**
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(elec. conductive laminates with good antistatic property at low humidity)

IT Laminated plastics, uses
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(elec. conductive laminates with good antistatic property at low humidity)

IT Coating materials
(elec. conductive; elec. conductive laminates with good antistatic property at low humidity)

IT Polyesters, uses
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(substrate; elec. conductive laminates with good antistatic property at low humidity)

IT Polyesters, uses
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(sulfo-containing, acrylic polymer-grafted; elec. conductive laminates with good antistatic property at low humidity)

IT 167860-86-8P, 2-Aminoanisole-4-sulfonic acid homopolymer
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(conductive coating containing; elec. conductive laminates with good antistatic property at low humidity)

IT 247098-14-2P 247098-15-3P 247098-16-4P **247116-00-3P**, Butyl acrylate-dimethyl isophthalate-dimethyl 5-sodiosulfoisophthalate-dimethyl terephthalate-ethylene glycol-fumaric acid-glycerin monomethacrylate-methacrylic acid-methyl methacrylate-3-methyl-1,5-pentanediol-sodium styrenesulfonate-styrene graft copolymer **247116-02-5P**
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(elec. conductive laminates with good antistatic property at low humidity)

IT 9036-19-5, Emulgen 810
RL: MOA (Modifier or additive use); USES (Uses)
(elec. conductive laminates with good antistatic property at low humidity)

IT 25038-59-9, uses
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(substrate; elec. conductive laminates with good antistatic property at low humidity)

IT **247116-00-3P**, Butyl acrylate-dimethyl isophthalate-dimethyl 5-sodiosulfoisophthalate-dimethyl terephthalate-ethylene glycol-fumaric acid-glycerin monomethacrylate-methacrylic acid-methyl methacrylate-3-methyl-1,5-pentanediol-sodium styrenesulfonate-styrene graft copolymer **247116-02-5P**

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(elec. conductive laminates with good antistatic property at low humidity)

RN 247116-00-3 HCAPLUS

CN 1,3-Benzenedicarboxylic acid, 5-sulfo-, 1,3-dimethyl ester, sodium salt, polymer with (2E)-2-butenedioic acid, butyl 2-propenoate, dimethyl 1,3-benzenedicarboxylate, dimethyl 1,4-benzenedicarboxylate, 1,2-ethanediol, ethenylbenzene, methyl 2-methyl-2-propenoate, 3-methyl-1,5-pentanediol, 2-methyl-2-propenoic acid, 1,2,3-propanetriol mono(2-methyl-2-propenoate) and sodium ethenylbenzenesulfonate, graft (9CI) (CA INDEX NAME)

CM 1

CRN 27457-28-9
CMF C8 H8 O3 S . Na
CCI IDS

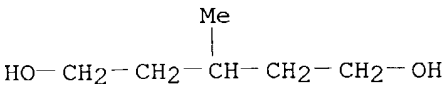
D1—CH═CH2

D1—SO3H

● Na

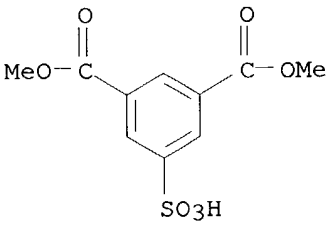
CM 2

CRN 4457-71-0
CMF C6 H14 O2



CM 3

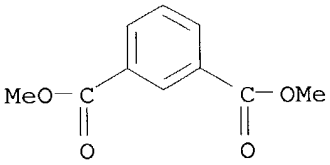
CRN 3965-55-7
CMF C10 H10 O7 S . Na



● Na

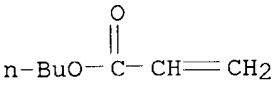
CM 4

CRN 1459-93-4
CMF C10 H10 O4



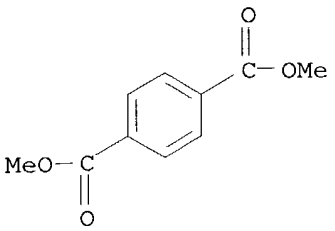
CM 5

CRN 141-32-2
CMF C7 H12 O2



CM 6

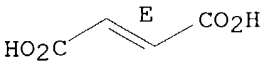
CRN 120-61-6
CMF C10 H10 O4



CM 7

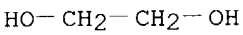
CRN 110-17-8
CMF C4 H4 O4

Double bond geometry as shown.



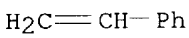
CM 8

CRN 107-21-1
CMF C2 H6 O2



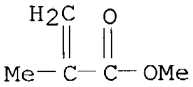
CM 9

CRN 100-42-5
CMF C8 H8



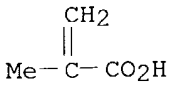
CM 10

CRN 80-62-6
CMF C5 H8 O2



CM 11

CRN 79-41-4
CMF C4 H6 O2

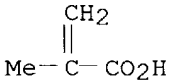


CM 12

CRN 50853-28-6
CMF C7 H12 O4
CCI IDS

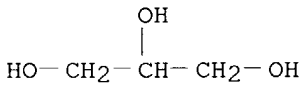
CM 13

CRN 79-41-4
CMF C4 H6 O2



CM 14

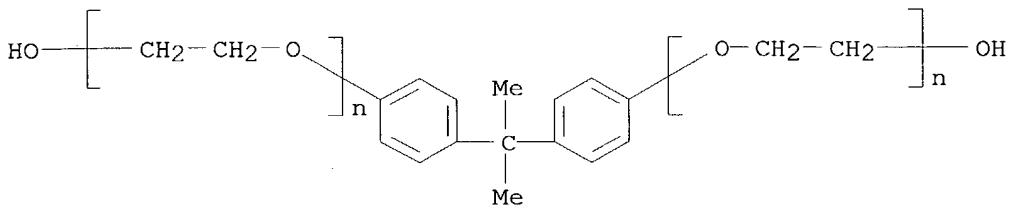
CRN 56-81-5
CMF C3 H8 O3



RN 247116-02-5 HCAPLUS
CN 1,3-Benzenedicarboxylic acid, 5-sulfo-, 1,3-dimethyl ester, sodium salt, polymer with (2E)-2-butenedioic acid, dimethyl 1,3-benzenedicarboxylate, dimethyl 1,4-benzenedicarboxylate, 1,2-ethanediol, ethenylbenzene, α,α'-[(1-methylethylidene)di-4,1-phenylene]bis[ω-hydroxypoly(oxy-1,2-ethanediyl)], methyl 2-methyl-2-propenoate, 2-methyl-2-propenoic acid, 1,2,3-propanetriol mono(2-methyl-2-propenoate) and sodium ethenylbenzenesulfonate, graft (9CI) (CA INDEX NAME)

CM 1

CRN 32492-61-8
CMF (C2 H4 O)n (C2 H4 O)n C15 H16 O2
CCI PMS



CM 2

CRN 27457-28-9

CMF C8 H8 O3 S . Na
CCI IDS

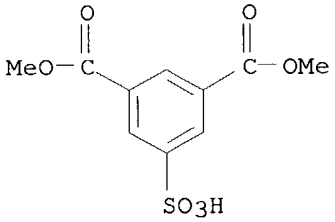
D1— CH═ CH_2

D1— SO_3H

● Na

CM 3

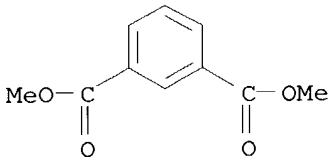
CRN 3965-55-7
CMF C10 H10 O7 S . Na



● Na

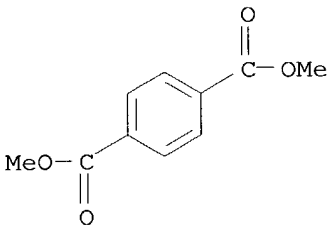
CM 4

CRN 1459-93-4
CMF C10 H10 O4



CM 5

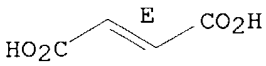
CRN 120-61-6
CMF C10 H10 O4



CM 6

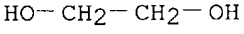
CRN 110-17-8
CMF C4 H4 O4

Double bond geometry as shown.



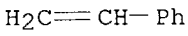
CM 7

CRN 107-21-1
CMF C2 H6 O2



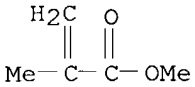
CM 8

CRN 100-42-5
CMF C8 H8



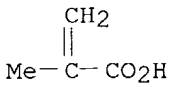
CM 9

CRN 80-62-6
CMF C5 H8 O2



CM 10

CRN 79-41-4
CMF C4 H6 O2

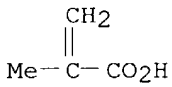


CM 11

CRN 50853-28-6
CMF C7 H12 O4
CCI IDS

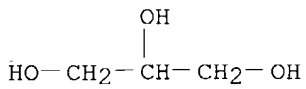
CM 12

CRN 79-41-4
CMF C4 H6 O2



CM 13

CRN 56-81-5
CMF C3 H8 O3

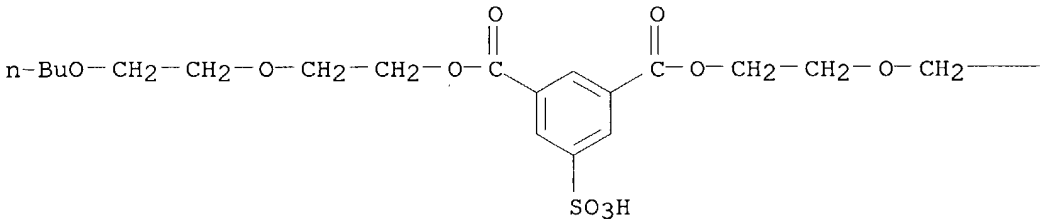


L48 ANSWER 19 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1999:459589 HCAPLUS
DN 131:200644
ED Entered STN: 28 Jul 1999
TI Spectroscopic studies of **polyaniline** protonated with esters of 5-sulfoisophthalic acid
AU Kulszewicz-Bajer, I.; Zagorska, M.; Bany, A.; Lukasik, L.
CS Faculty of Chemistry, Warsaw University of Technology, Warsaw, 00-664, Pol.
SO Synthetic Metals (1999), 101(1-3), 713-714
CODEN: SYMEDZ; ISSN: 0379-6779
PB Elsevier Science S.A.
DT Journal
LA English
CC 37-5 (Plastics Manufacture and Processing)
Section cross-reference(s): 73
AB **Polyaniline** (PANI) has been doped with a new class of protonating agents, namely diesters of 5-sulfoisophthalic acid. The incorporation of this type of dopant results in enhanced solubility of PANI salts. Depending on the protonation medium, different types of UV-visible-near IR spectra are obtained.
ST **polyaniline** sulfoisophthalate ester doping spectra; protonation **polyaniline** sulfoisophthalate diester
IT IR spectra
(near-IR; of **polyaniline** doped with sulfoisophthalic acid diesters)
IT Electric conductivity
UV and visible spectra
(of **polyaniline** doped with sulfoisophthalic acid diesters)
IT Protonation
(of **polyaniline** with sulfoisophthalic acid diesters)
IT Conducting polymers
Dopants
(spectra of **polyaniline** doped with sulfoisophthalic acid diesters)
IT **Polyanilines**
RL: PRP (Properties)
(spectra of **polyaniline** doped with sulfoisophthalic acid diesters)
IT **178374-58-8 241147-16-0 241147-17-1 241147-18-2**
RL: MOA (Modifier or additive use); USES (Uses)
(dopant/protonation agent; spectra of **polyaniline** doped with sulfoisophthalic acid diesters)
IT 22326-31-4D, 5-Sulfoisophthalic acid, esters with Rokanol 87521-29-7D, Rokanol, esters with 5-sulfoisophthalic acid
RL: MOA (Modifier or additive use); USES (Uses)
(dopants/protonation agents; spectra of **polyaniline** doped with)
IT 25233-30-1, **Polyaniline**
RL: PRP (Properties)
(spectra of **polyaniline** doped with sulfoisophthalic acid diesters)
RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Cao, Y; Synth Met 1992, V48, P91 HCAPLUS
(2) Cao, Y; Synth Met 1995, V69, P187 HCAPLUS
IT **178374-58-8 241147-16-0 241147-17-1**

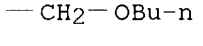
241147-18-2
RL: MOA (Modifier or additive use); USES (Uses)
(dopant/protonation agent; spectra of **polyaniline** doped with sulfoisophthalic acid diesters)

RN 178374-58-8 HCAPLUS
CN 1,3-Benzenedicarboxylic acid, 5-sulfo-, 1,3-bis[2-(2-butoxyethoxy)ethyl] ester (9CI) (CA INDEX NAME)

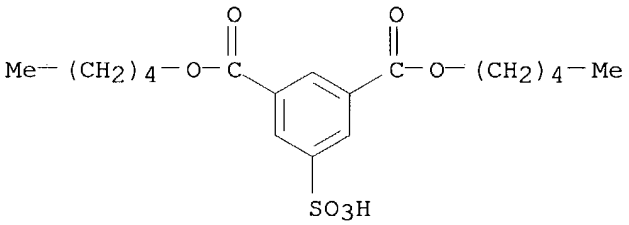
PAGE 1-A



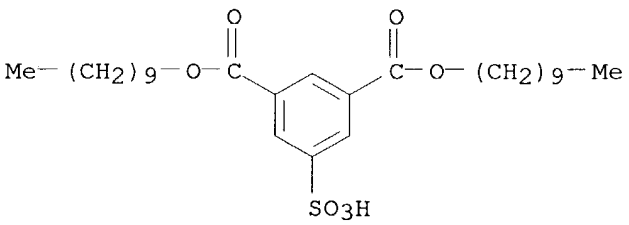
PAGE 1-B



RN 241147-16-0 HCAPLUS
CN 1,3-Benzenedicarboxylic acid, 5-sulfo-, 1,3-dipentyl ester (9CI) (CA INDEX NAME)



RN 241147-17-1 HCAPLUS
CN 1,3-Benzenedicarboxylic acid, 5-sulfo-, 1,3-didecyl ester (9CI) (CA INDEX NAME)



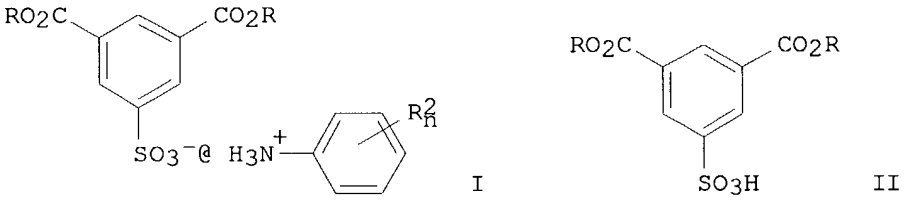
RN 241147-18-2 HCAPLUS
CN 1,3-Benzenedicarboxylic acid, 5-sulfo-, 1,3-bis(2-butoxyethyl) ester (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L48 ANSWER 20 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1999:378461 HCAPLUS
DN 131:45268
ED Entered STN: 18 Jun 1999
TI Manufacture of sulfoanilinium isophthalic acid diesters for preparation of doped **polyanilines**
IN Ogata, Eiji; Yanase, Norio; Sakamoto, Shigeru
PA Konishi Kagaku Kogyo Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM C07C309-58
ICS C07C303-32; C07C319-20; C07C323-12
CC 35-7 (Chemistry of Synthetic High Polymers)
Section cross-reference(s): 25
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 11158139	A2	19990615	JP 1997-324862	19971126
PRAI JP 1997-324862		19971126		

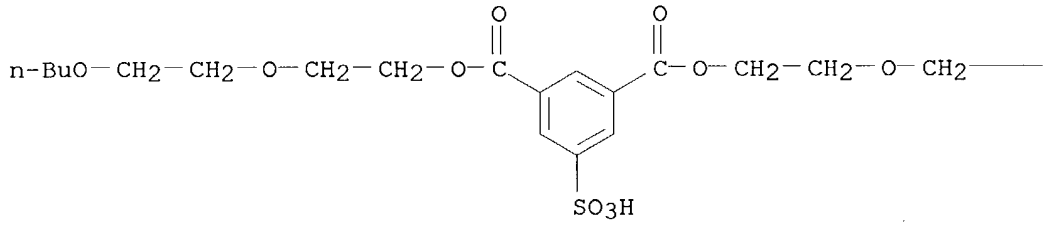
OS MARPAT 131:45268
GI



AB Title compds. I (R = R1OCH2CH2OCH2CH2; R1 = H, C1-15 alkyl, alkenyl, alkylthioalkyl, aryl, alkylaryl, etc.; R2 = C1-4 alkyl, alkoxy; n = 0-2) are prepared by esterification of 5-sulfoisophthalic acid with ROH in water-immiscible organic solvents and neutralization of 5-sulfoisophthalic acid diesters II with H2NC6H5-nR2n. Diethylene glycol monobutyl ether was reacted with 5-sulfoisophthalic acid in PhCl at 80-86° under 130-210 mm Hg for 8 h to give 93% bis(butoxyethoxyethyl) 5-sulfoisophthalate which was neutralized with PhNH2 to give 84% bis(butoxyethoxyethyl) 5-sulfoisophthalate PhNH2 salt (III). **Polyaniline** doped with bis(butoxyethoxyethyl) 5-sulfoisophthalate was prepared from III.
ST sulfoisophthalate aniline salt manuf doped **polyaniline**; sulfoisophthalic acid esterification alc; aniline neutralization sulfoisophthalic acid diester
IT **Polyanilines**
RL: IMF (Industrial manufacture); PREP (Preparation)
(bis(butoxyethoxyethyl) 5-sulfoisophthalate-doped; preparation of sulfoanilinium isophthalic acid diesters for preparation of doped **polyanilines**)
IT Conducting polymers
(preparation of sulfoanilinium isophthalic acid diesters for preparation of doped

polyanilines)
IT 25233-30-1P, **Polyaniline**
RL: IMF (Industrial manufacture); PREP (Preparation)
(bis(butoxyethoxyethyl) 5-sulfoisophthalate-doped; preparation of sulfoanilinium isophthalic acid diesters for preparation of doped **polyanilines**)
IT **178374-58-8P 227621-21-8P**
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(preparation of sulfoanilinium isophthalic acid diesters for preparation of doped **polyanilines**)
IT 62-53-3, Benzenamine, reactions 112-34-5, Diethylene glycol monobutyl ether 22326-31-4, 5-Sulfoisophthalic acid
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of sulfoanilinium isophthalic acid diesters for preparation of doped **polyanilines**)
IT **178374-58-8P 227621-21-8P**
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(preparation of sulfoanilinium isophthalic acid diesters for preparation of doped **polyanilines**)
RN 178374-58-8 HCAPLUS
CN 1,3-Benzenedicarboxylic acid, 5-sulfo-, 1,3-bis[2-(2-butoxyethoxy)ethyl] ester (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B

—CH2—OBu-n

RN 227621-21-8 HCAPLUS
CN 1,3-Benzenedicarboxylic acid, 5-sulfo-, 1,3-bis[2-(2-butoxyethoxy)ethyl] ester, compd. with benzenamine (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 178374-58-8
CMF C24 H38 O11 S

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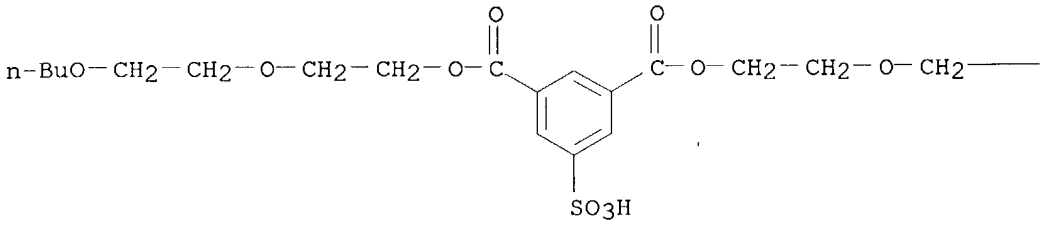
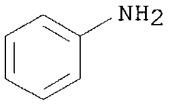


PAGE 1-B

—CH2—OBu-n

CM 2

CRN 62-53-3
CMF C6 H7 N



L48 ANSWER 21 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1999:365687 HCAPLUS
DN 131:31807
ED Entered STN: 14 Jun 1999
TI Preparation of 5-sulfoisophthalic acid diesters and their salts
IN Ogata, Eiji; Yanase, Norio; Sakamoto, Shigeru
PA Konishi Kagaku Kogyo Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM C07C309-58
ICS C07C303-22; C07C319-20; C07C323-12
CC 25-18 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)
Section cross-reference(s): 37, 76
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 11152261	A2	19990608	JP 1997-319858	19971120
PRAI JP 1997-319858		19971120		

OS MARPAT 131:31807
AB 5-Sulfoisophthalic acid (I) diesters, especially useful as dopants for **polyaniline**, are prepared by azeotropic dehydration-esterification of I with ROH [R = R1O(CH2)2O(CH2)2; R1 = H, C1-15 alkyl, alkenyl, alkylthioalkyl, aryl, alkylaryl, arylalkyl, alkoxyalkyl, aryloxyalkyl] in the presence of H2O-nonmiscible organic solvents. I diester salts are prepared by neutralization of the I diesters with NH3 or (hydrogen) carbonate salts of alkali metals or alkaline earth metals. A solution containing Bu diglycol, I, and PhCl was distilled at 80-86° under 130-210 mmHg in a reaction system while fractionating the distillate in H2O/PhCl and returning the PhCl phase into the reaction system for 8 h to give a reaction mixture [I bis(diethylene glycol monobutyl) ester content 93%, monoester content 2%], which was neutralized with Na2CO3 and distilled to give an aqueous solution showing 5-sodiumsulfoisophthalic acid bis(diethylene glycol monobutyl) ester content 87% and monoester content 6%. PhCl was collected by fractionation of the distillate with recovery rate 99%.
ST sulfoisophthalate diester prepn azeotropic dehydration; esterification sulfoisophthalic acid azeotropic dehydration; chlorobenzene solvent azeotropic dehydration sulfoisophthalate esterification; diglycol butyl sulfoisophthalate diester prepn; **polyaniline** dopant sodiumsulfoisophthalate diester prepn
IT Dehydration reaction
Esterification
(azeotropic dehydration-esterification in preparation of 5-sulfoisophthalic acid diesters as dopants for **polyaniline**)
IT **Polyanilines**
RL: POF (Polymer in formulation); USES (Uses)
(azeotropic dehydration-esterification in preparation of 5-sulfoisophthalic acid diesters as dopants for **polyaniline**)
IT Distillation
(azeotropic; azeotropic dehydration-esterification in preparation of 5-sulfoisophthalic acid diesters as dopants for **polyaniline**)
IT Alcohols, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(ether; azeotropic dehydration-esterification in preparation of 5-sulfoisophthalic acid diesters as dopants for **polyaniline**)

IT Solvents
(organic; azeotropic dehydration-esterification in preparation of 5-sulfoisophthalic acid diesters as dopants for **polyaniline**)

IT **176236-30-9P 178374-58-8P**
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(azeotropic dehydration-esterification in preparation of 5-sulfoisophthalic acid diesters as dopants for **polyaniline**)

IT 25233-30-1, **Polyaniline**
RL: POF (Polymer in formulation); USES (Uses)
(azeotropic dehydration-esterification in preparation of 5-sulfoisophthalic acid diesters as dopants for **polyaniline**)

IT 112-34-5, Butyl diglycol 22326-31-4, 5-Sulfoisophthalic acid
RL: RCT (Reactant); RACT (Reactant or reagent)
(azeotropic dehydration-esterification in preparation of 5-sulfoisophthalic acid diesters as dopants for **polyaniline**)

IT 497-19-8, Sodium carbonate, reactions 7664-41-7, Ammonia, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(in salt formation; azeotropic dehydration-esterification in preparation of 5-sulfoisophthalic acid diesters as dopants for **polyaniline**)

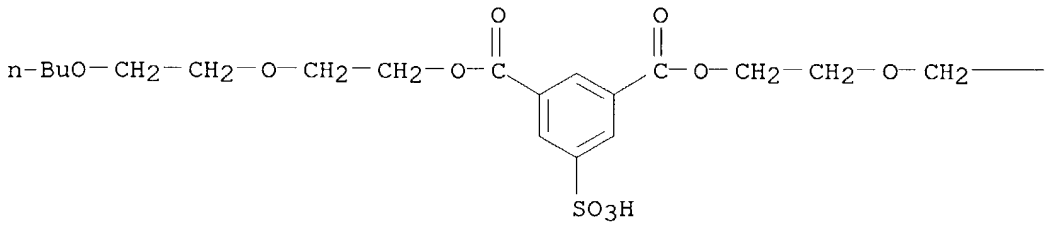
IT 95-47-6, o-Xylene, uses 100-41-4, Ethylbenzene, uses 106-42-3, p-Xylene, uses 108-38-3, uses 108-90-7, Chlorobenzene, uses
RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
(solvent; azeotropic dehydration-esterification in preparation of 5-sulfoisophthalic acid diesters as dopants for **polyaniline**)

IT **176236-30-9P 178374-58-8P**
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(azeotropic dehydration-esterification in preparation of 5-sulfoisophthalic acid diesters as dopants for **polyaniline**)

RN 176236-30-9 HCAPLUS

CN 1,3-Benzenedicarboxylic acid, 5-sulfo-, 1,3-bis[2-(2-butoxyethoxy)ethyl] ester, sodium salt (9CI) (CA INDEX NAME)

PAGE 1-A



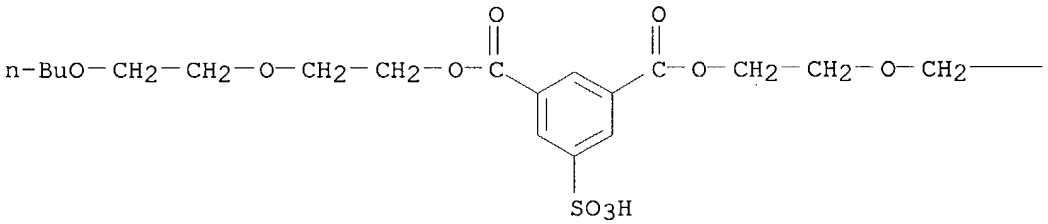
● Na

PAGE 1-B

— CH_2 — OBu-n

RN 178374-58-8 HCAPLUS
CN 1,3-Benzenedicarboxylic acid, 5-sulfo-, 1,3-bis[2-(2-butoxyethoxy)ethyl] ester (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B

— CH_2 — OBu-n

L48 ANSWER 22 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1999:70215 HCAPLUS
DN 130:140599
ED Entered STN: 02 Feb 1999
TI Anticorrosive coating of **polyaniline**
IN Yutani, Takeshi; Tatemori, Hiroshi; Tokai, Masaya; Uno, Keiichi
PA Toyobo Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM C09D179-00
ICS C09D005-08; C09D007-12; C08K003-32; C08L079-00
CC 42-10 (Coatings, Inks, and Related Products)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 11021505	A2	19990126	JP 1997-181011	19970707
PRAI	JP 1997-181011		19970707		

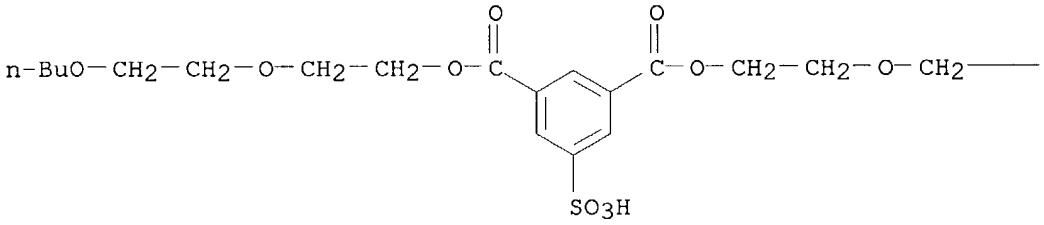
AB An anticorrosive coating from **polyaniline** or its derivs. contains phosphoric acid additive. Thus, **polyaniline** (number mol. weight 27,000) was prepared with ammonium persulfate and doped with 1,3-bis[2-(2-butoxyethoxy)ethyl] 5-sulfo-1,3-benzenedicarboxylate, 1.5 parts of which was mixed with epoxy resin (Epikote 1001) 2.6, curing agent BTDA 0.9, phosphoric acid 0.6 and THF 94.4 parts for a primer coating on steel plate, showing good peel strength.
ST phosphoric acid anticorrosive **polyaniline** coating
IT **Polyanilines**
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(anticorrosive coating of **polyaniline** with phosphoric acid)
IT Coating materials
(anticorrosive; anticorrosive coating of **polyaniline** with phosphoric acid)
IT Epoxy resins, uses
Polyesters, uses
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(in coating; anticorrosive coating of **polyaniline** with phosphoric acid)
IT 7664-38-2, Phosphoric acid, uses
RL: MOA (Modifier or additive use); USES (Uses)
(anticorrosive coating of **polyaniline** with phosphoric acid)
IT 25233-30-1, **Polyaniline**
RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)
(anticorrosive coating of **polyaniline** with phosphoric acid)
IT **178374-58-8**
RL: MOA (Modifier or additive use); USES (Uses)
(doping agent; anticorrosive coating of **polyaniline** with phosphoric acid)
IT 25068-38-6, Epicote 1001 109191-29-9, Vylon RV 290
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(in coating; anticorrosive coating of **polyaniline** with phosphoric acid)
IT **178374-58-8**
RL: MOA (Modifier or additive use); USES (Uses)
(doping agent; anticorrosive coating of **polyaniline** with

phosphoric acid)

RN 178374-58-8 HCAPLUS

CN 1,3-Benzenedicarboxylic acid, 5-sulfo-, 1,3-bis[2-(2-butoxyethoxy)ethyl] ester (9CI) (CA INDEX NAME)

PAGE 1-A



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—CH_2—OBu-n

L48 ANSWER 23 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1998:685352 HCAPLUS
DN 130:19711
ED Entered STN: 29 Oct 1998
TI Electroconductive **polyaniline**-based electrolyte, its manufacture, and solid electrolytic capacitor using the same
IN Tatemori, Hiroshi; Yutani, Yuji; Tokai, Masaya; Uno, Keiichi
PA Toyobo Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM H01G009-028
ICS H01G009-00
CC 76-10 (Electric Phenomena)
Section cross-reference(s): 38
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 10284350	A2	19981023	JP 1997-86621	19970404
PRAI JP 1997-86621		19970404		

OS MARPAT 130:19711
AB The electrolyte comprises a **polyaniline** (derivative) composition containing a protonic acid as a dopant, shows elec. conductivity ≥10-9 S/cm, is soluble in a doped state, and satisfies relationship Md/Pn 350-2000 [Md = mol. weight of dopant; Pn = number of protonic acid groups of pKa (/mol.) ≤4.0]. The dopant may be represented by C6R1'k'(COCH2CH2OCH2CH2OR1)k SO3H (R1 = H, C1-15 substituents; R1' = H, substituents; k = 1-5; k' = 0-4; k + k' = 5) or R2O(CH2CH2O)pSO3H (R2 = C5-20 substituents; p = 1-5). The electrolyte is manufactured by applying a solution containing the **polyaniline** composition on a oxide-coated metal substrate and drying. A solid electrolytic capacitor using the electrolyte is also claimed.
ST **polyaniline** electrolyte solvent sol capacitor manuf; benzenesulfonic acid doped **polyaniline** electrolyte; dodecyltrisethoxysulfonic acid doped **polyaniline** polyelectrolyte capacitor
IT Acids, uses
RL: MOA (Modifier or additive use); USES (Uses)
(dopants; solvent-soluble doped **polyaniline** electrolyte for manufacture of solid electrolytic capacitor by coating process)
IT Electrolytic capacitors
Polymer electrolytes
(solvent-soluble doped **polyaniline** electrolyte for manufacture of solid electrolytic capacitor by coating process)
IT **Polyanilines**
RL: DEV (Device component use); IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); PREP (Preparation); PROC (Process); USES (Uses)
(solvent-soluble doped **polyaniline** electrolyte for manufacture of solid electrolytic capacitor by coating process)
IT 13150-00-0P **178374-58-8P**
RL: MOA (Modifier or additive use); PNU (Preparation, unclassified); PREP (Preparation); USES (Uses)
(dopant; solvent-soluble doped **polyaniline** electrolyte for manufacture of solid electrolytic capacitor by coating process)
IT 112-34-5, Diethylene glycol mono-n-butyl ether **3965-55-7**, Dimethyl 5-sodiosulfoisophthalate **176236-30-9**,

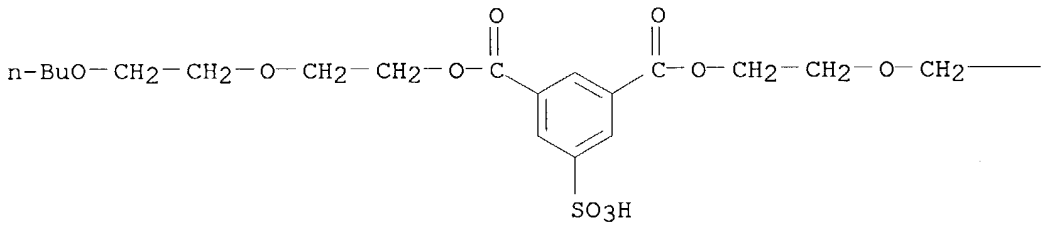
5-Sodiosulfoisophthalic acid bis(diethylene glycol monobutyl ether) ester
RL: RCT (Reactant); RACT (Reactant or reagent)
(in preparation of protonic acid with good compatibility to solvents for polyelectrolyte dopant)

IT 25233-30-1P, **Polyaniline**
RL: DEV (Device component use); IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); PREP (Preparation); PROC (Process); USES (Uses)
(solvent-soluble doped **polyaniline** electrolyte for manufacture of solid electrolytic capacitor by coating process)

IT **178374-58-8P**
RL: MOA (Modifier or additive use); PNU (Preparation, unclassified); PREP (Preparation); USES (Uses)
(dopant; solvent-soluble doped **polyaniline** electrolyte for manufacture of solid electrolytic capacitor by coating process)

RN 178374-58-8 HCAPLUS
CN 1,3-Benzenedicarboxylic acid, 5-sulfo-, 1,3-bis[2-(2-butoxyethoxy)ethyl] ester (9CI) (CA INDEX NAME)

PAGE 1-A

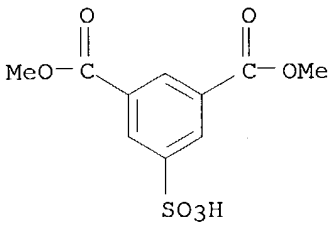


PAGE 1-B

—CH2—OBu-n

IT **3965-55-7**, Dimethyl 5-sodiosulfoisophthalate **176236-30-9**, 5-Sodiosulfoisophthalic acid bis(diethylene glycol monobutyl ether) ester
RL: RCT (Reactant); RACT (Reactant or reagent)
(in preparation of protonic acid with good compatibility to solvents for polyelectrolyte dopant)

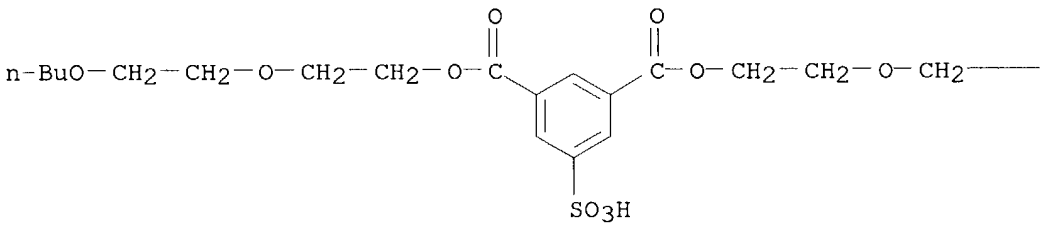
RN 3965-55-7 HCAPLUS
CN 1,3-Benzenedicarboxylic acid, 5-sulfo-, 1,3-dimethyl ester, sodium salt (9CI) (CA INDEX NAME)



● Na

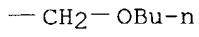
RN 176236-30-9 HCAPLUS
CN 1,3-Benzenedicarboxylic acid, 5-sulfo-, 1,3-bis[2-(2-butoxyethoxy)ethyl] ester, sodium salt (9CI) (CA INDEX NAME)

PAGE 1-A



● Na

PAGE 1-B



L48 ANSWER 24 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1996:694146 HCAPLUS
DN 125:312338
ED Entered STN: 25 Nov 1996
TI Silver halide color photographic films having improved antistatic coatings.
IN Tachibana, Noriki; Kotani, Chiaki; Okamura, Shinichi; Morita, Seiwa
PA Konishiroku Photo Ind, Japan
SO Jpn. Kokai Tokkyo Koho, 77 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM G03C001-85
ICS G03C001-37; G03C001-89
CC 74-2 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
Section cross-reference(s): 42
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 08211555	A2	19960820	JP 1995-16024	19950202
PRAI JP 1995-16024		19950202		

AB The claimed photog. films has antistatic layer comprising a conjugated π-electron system-containing conductive polymer, an aqueous copolyester, a crosslinker, and if necessary a specific preservative. The antistatic coating composition has excellent antistatic property, coating characteristics, and storage stability.

ST antistatic coating photog film

IT Photographic films
(antistatic coating containing π-conjugation system conductive polymers)

IT Polyesters, preparation
RL: DEV (Device component use); PNU (Preparation, unclassified); PREP (Preparation); USES (Uses)
(antistatic coating containing π-conjugation system conductive polymers and co-polyesters)

IT Antistatic agents
(coatings, conductive polymers for photog. films)

IT **30307-45-0P**, Dimethyl isophthalate-dimethyl 5-sodiosulfoisophthalate-dimethyl terephthalate-ethylene glycol copolymer **183313-21-5P**, Ethylene glycol-isophthalic acid-terephthalic acid-di(2-hydroxyethyl) 5-sodiosulfoisophthalate copolymer **183313-22-6P**
RL: DEV (Device component use); PNU (Preparation, unclassified); PREP (Preparation); USES (Uses)
(antistatic coating containing π-conjugated polymer and polyester for photog. films)

IT 25067-54-3P, Polyfuran 25190-54-9P, Poly(2,5-dimethoxy-p-phenylenevinylene) 25233-30-1P, **Polyaniline** 25233-34-5P, Polythiophene 26009-24-5P, Poly(p-phenylenevinylene) 26498-02-2P, Poly(2,5-thiophenediyl-1,2-ethenediyl) 27073-41-2P 27082-18-4P, Poly(N-methylaniline) 30604-81-0P, Polypyrrole 89298-12-4P 91201-85-3P 94750-56-8P, Poly(3,5-dimethylaniline) 95831-23-5P, Poly(3-ethylpyrrole) 95831-25-7P 97126-62-0P, Poly[N-(2-hydroxyethyl)aniline] 99742-70-8P, Poly(2-methoxyaniline) 104934-53-4P, Poly(3-dodecylthiophene) 105935-08-8P, Poly(3,4-dimethoxypyrrole) 110847-38-6P 113285-82-8P 114815-74-6P 117312-30-8P 118337-98-7P 121536-25-2P 122721-92-0P 132670-08-7P 133184-17-5P 137539-66-3P 162152-30-9P 162369-94-0P 162369-98-4P

162370-00-5P 165455-34-5P 181226-79-9P 181226-82-4P 182956-11-2P
182956-19-0P 183313-06-6P 183313-09-9P 183313-11-3P 183313-14-6P
183313-16-8P 183313-18-0P 183313-20-4P
RL: DEV (Device component use); PNU (Preparation, unclassified); PREP (Preparation); USES (Uses)
(antistatic coating containing π-conjugated polymer for photog. films)

IT 133150-73-9P
RL: DEV (Device component use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)
(antistatic coating containing π-conjugated polymer for photog. films)

IT 959-52-4 2736-18-7, 2,4-Dichloro-6-hydroxy-1,3,5-triazine sodium salt
3278-22-6, Di(vinylsulfonyl)methane 4156-16-5 6160-65-2 13236-02-7
13829-06-6 26750-50-5, Bis(vinylsulfonylmethyl) ether 27043-36-3
39690-70-5 57116-45-7 60345-53-1 63834-51-5 65411-60-1
66710-66-5, 1,2-Bis(vinylsulfonylacetamido)ethane 67006-32-0
70443-73-1 99944-60-2 101385-69-7 107020-62-2 112183-79-6
115653-16-2 115685-19-3 138503-23-8 160237-75-2 183313-24-8
RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses)
(crosslinker for antistatic coatings on photog. films)

IT 52-51-7 1003-07-2, 3(2H)-Isothiazolone 2634-34-6 2682-20-4
19983-35-8 26172-55-4 26530-20-1 26542-23-4 33344-74-0
53607-26-4 57063-29-3 142383-74-2 182892-13-3 182892-15-5
183313-25-9 183313-26-0 183313-27-1 183313-28-2 183313-29-3
183313-31-7 183313-32-8
RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses)
(preservatives for antistatic coating on photog. films)

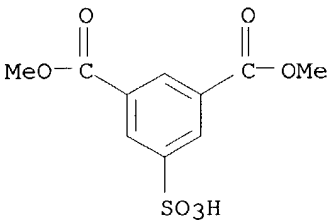
IT **30307-45-0P**, Dimethyl isophthalate-dimethyl 5-sodiosulfoisophthalate-dimethyl terephthalate-ethylene glycol copolymer
183313-21-5P, Ethylene glycol-isophthalic acid-terephthalic acid-di(2-hydroxyethyl) 5-sodiosulfoisophthalate copolymer
183313-22-6P
RL: DEV (Device component use); PNU (Preparation, unclassified); PREP (Preparation); USES (Uses)
(antistatic coating containing π-conjugated polymer and polyester for photog. films)

RN 30307-45-0 HCAPLUS

CN 1,3-Benzenedicarboxylic acid, 5-sulfo-, 1,3-dimethyl ester, sodium salt, polymer with dimethyl 1,3-benzenedicarboxylate, dimethyl 1,4-benzenedicarboxylate and 1,2-ethanediol (9CI) (CA INDEX NAME)

CM 1

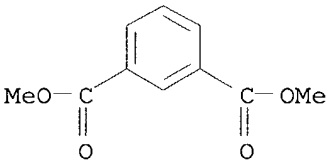
CRN 3965-55-7
CMF C10 H10 O7 S . Na



● Na

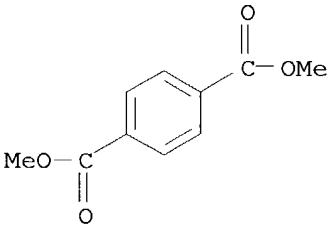
CM 2

CRN 1459-93-4
CMF C10 H10 O4



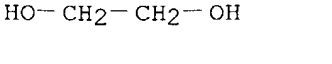
CM 3

CRN 120-61-6
CMF C10 H10 O4



CM 4

CRN 107-21-1
CMF C2 H6 O2



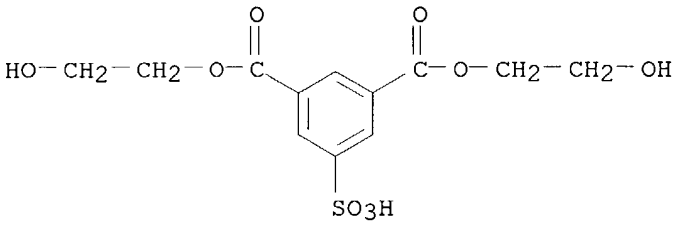
RN 183313-21-5 HCAPLUS

KATHLEEN FULLER EIC 1700 REMSEN 4B28 571/272-2505

CN 1,3-Benzenedicarboxylic acid, 5-sulfo-, 1,3-bis(2-hydroxyethyl) ester, monosodium salt, polymer with 1,3-benzenedicarboxylic acid, 1,4-benzenedicarboxylic acid and 1,2-ethanediol (9CI) (CA INDEX NAME)

CM 1

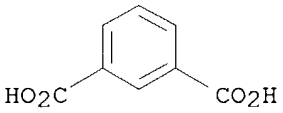
CRN 24019-46-3
CMF C12 H14 O9 S . Na



● Na

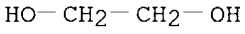
CM 2

CRN 121-91-5
CMF C8 H6 O4



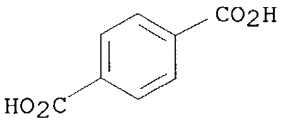
CM 3

CRN 107-21-1
CMF C2 H6 O2



CM 4

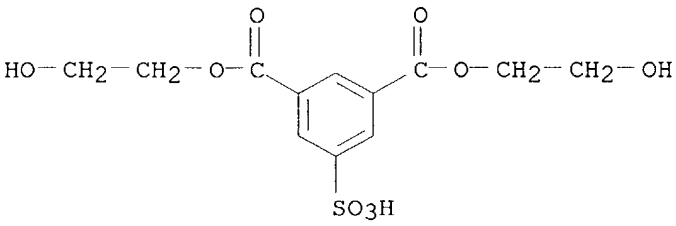
CRN 100-21-0
CMF C8 H6 O4



RN 183313-22-6 HCAPLUS
CN 1,3-Benzenedicarboxylic acid, 5-sulfo-, 1,3-bis(2-hydroxyethyl) ester, monosodium salt, polymer with 1,3-benzenedicarboxylic acid, 1,4-benzenedicarboxylic acid, 1,2-ethanediol and hexanedioic acid (9CI) (CA INDEX NAME)

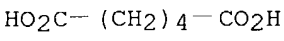
CM 1

CRN 24019-46-3
CMF C12 H14 O9 S . Na



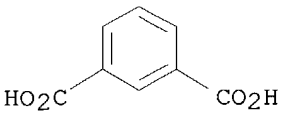
CM 2

CRN 124-04-9
CMF C6 H10 O4



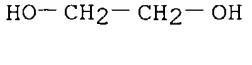
CM 3

CRN 121-91-5
CMF C8 H6 O4



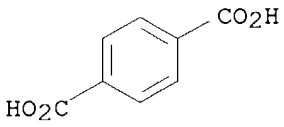
CM 4

CRN 107-21-1
CMF C2 H6 O2



CM 5

CRN 100-21-0
CMF C8 H6 O4



L48 ANSWER 25 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1996:468940 HCAPLUS
DN 125:129989
ED Entered STN: 08 Aug 1996
TI Water-based **polyaniline** compositions and their manufacture
IN Tani, Fumito; Yoshitani, Juji; Uno, Keiichi
PA Toyo Boseki, Japan; Toyobo Co., Ltd.
SO Jpn. Kokai Tokkyo Koho, 10 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM C08L067-02
ICS C08J003-03; C08J003-075; C08K003-24; C08L079-00; H01B001-12; H01B005-14
CC 76-2 (Electric Phenomena)
Section cross-reference(s): 37, 38, 42
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 08120167	A2	19960514	JP 1994-256944	19941021
	JP 3487370	B2	20040119		
PRAI	JP 1994-256944		19941021		

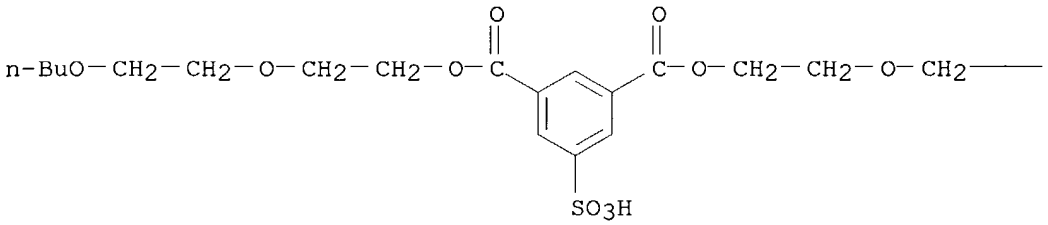
AB The title compns. comprise (A) **polyaniline** and/or their derivs., (B) proton acid dopants, (C) copolymer polyesters, and (D) H2O. The compns. may contain (E) water-soluble organic solvents and/or (F) surfactants. The title compns. may be manufactured by (1) dissolving or dispersing A and B to H2O and/or water-soluble solvents, (2) dissolving or dispersing C to H2O and/or water-soluble solvents, and (3) mixing the dispersions or the solvents. The compns. show elec. conductivity, charging property, transparency, and solvent resistance and are useful for films, coatings, etc.
ST **polyaniline** water based compn elec conductor; proton acid dopant **polyaniline** elec conductor; polyester **polyaniline** elec conductor
IT Electric conductors
(water-based **polyaniline** compns. containing proton acid dopants and polyesters and their manufacture)
IT Polyesters, uses
RL: PNU (Preparation, unclassified); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(water-based **polyaniline** compns. containing proton acid dopants and polyesters and their manufacture)
IT 1639-66-3 13150-00-0 13177-49-6 14857-90-0 28754-11-2 **178374-58-8** 178374-59-9
RL: MOA (Modifier or additive use); USES (Uses)
(dopant; water-based **polyaniline** compns. containing proton acid dopants and polyesters and their manufacture)
IT 25233-30-1P, **Polyaniline**
RL: PNU (Preparation, unclassified); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(water-based **polyaniline** compns. containing proton acid dopant and polyesters and their manufacture)
IT **179118-31-1P 179118-32-2P**
RL: PNU (Preparation, unclassified); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(water-based **polyaniline** compns. containing proton acid dopants and polyesters and their manufacture)
IT **178374-58-8**

RL: MOA (Modifier or additive use); USES (Uses)
(dopant; water-based **polyaniline** compns. containing proton acid dopants and polyesters and their manufacture)

RN 178374-58-8 HCAPLUS

CN 1,3-Benzenedicarboxylic acid, 5-sulfo-, 1,3-bis[2-(2-butoxyethoxy)ethyl] ester (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B

—CH_2—OBu-n

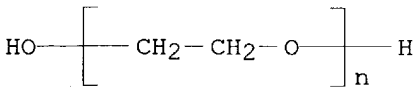
IT **179118-31-1P 179118-32-2P**
RL: PNU (Preparation, unclassified); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(water-based **polyaniline** compns. containing proton acid dopants and polyesters and their manufacture)

RN 179118-31-1 HCAPLUS

CN 1,3-Benzenedicarboxylic acid, 5-sulfo-, 1,3-bis(2-hydroxyethyl) ester, monosodium salt, polymer with bis(2-hydroxyethyl) 1,3-benzenedicarboxylate, bis(2-hydroxyethyl) 1,4-benzenedicarboxylate and α-hydro-ω-hydroxypoly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)

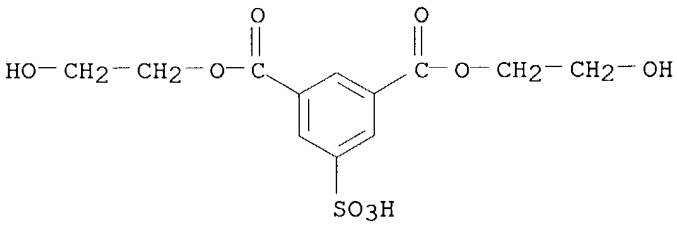
CM 1

CRN 25322-68-3
CMF (C2 H4 O)n H2 O
CCI PMS



CM 2

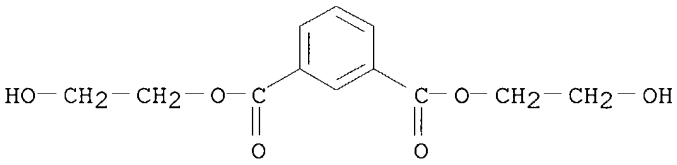
CRN 24019-46-3
CMF C12 H14 O9 S . Na



● Na

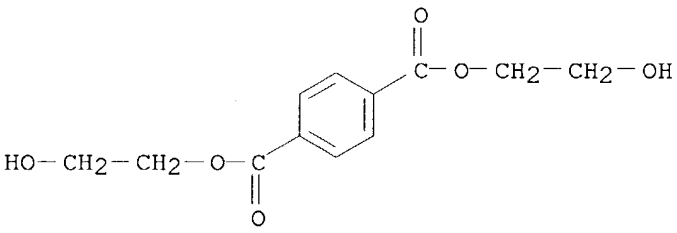
CM 3

CRN 3644-99-3
CMF C12 H14 O6



CM 4

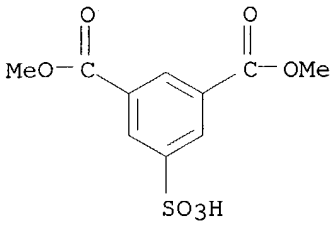
CRN 959-26-2
CMF C12 H14 O6



RN 179118-32-2 HCAPLUS
CN 1,3-Benzenedicarboxylic acid, 5-sulfo-, 1,3-dimethyl ester, sodium salt, polymer with dimethyl 1,3-benzenedicarboxylate, dimethyl 1,4-benzenedicarboxylate and 2,2-dimethyl-1,3-propanediol (9CI) (CA INDEX NAME)

CM 1

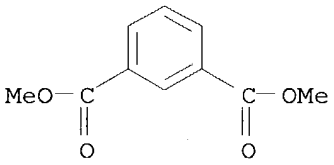
CRN 3965-55-7
CMF C10 H10 O7 S . Na



● Na

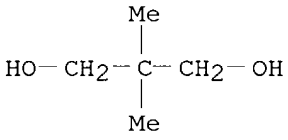
CM 2

CRN 1459-93-4
CMF C10 H10 O4



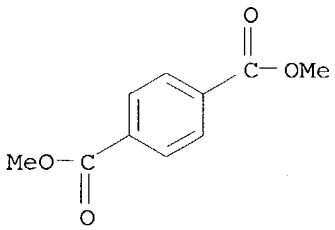
CM 3

CRN 126-30-7
CMF C5 H12 O2



CM 4

CRN 120-61-6
CMF C10 H10 O4


O
C— OMe
MeO— C
O

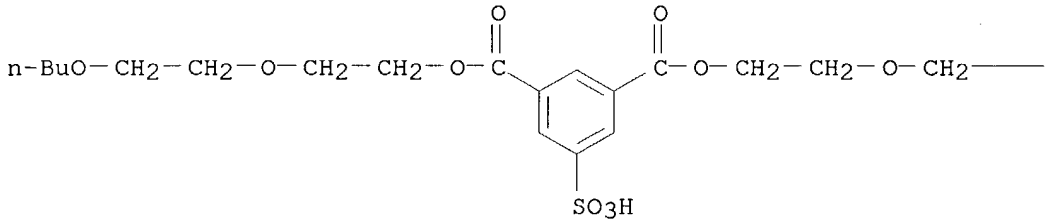
L48 ANSWER 26 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1996:428489 HCAPLUS
DN 125:61117
ED Entered STN: 20 Jul 1996
TI Antistatic agents containing electrically conductive organic polymers
IN Tani, Fumito; Yoshitani, Juji; Uno, Keiichi
PA Toyo Boseki, Japan
SO Jpn. Kokai Tokkyo Koho, 11 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM C08G073-00
ICS H01B001-12; H05F001-00
CC 42-10 (Coatings, Inks, and Related Products)
Section cross-reference(s): 40, 76
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 08100060	A2	19960416	JP 1994-232952	19940928
PRAI JP 1994-232952		19940928		

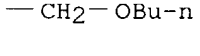
OS MARPAT 125:61117
AB The title agents, with elec. conductivity >10-9 S/cm and in dope dispersion or solution, useful for coatings on metals, films (e.g., of PET), synthetic paper (e.g., of polyester fibers), fibers (e.g., of cotton, wool, polyesters, polyamides), etc., contain **polyaniline** and/or its derivs. and protonic acid dopants with (mol. weight of dopant)/N = 350-2000 (N = number of protonic group when pKa <4.0) (e.g., reaction products of di-Me 5-sulfosodiumisophthalate and diethylene glycol monobutyl ether).
ST antistatic agent elec conductive **polyaniline**; dimethyl sulfosodiumisophthalate adduct antistatic coating; diethylene glycol monobutyl ether adduct coating
IT Antistatic agents
Cotton
Wool
(antistatic agents containing elec. conductive organic polymers)
IT Polyamide fibers, uses
Polyester fibers, uses
RL: NUU (Other use, unclassified); PRP (Properties); USES (Uses)
(antistatic agents containing elec. conductive organic polymers)
IT Coating materials
(antistatic, antistatic agents containing elec. conductive organic polymers)
IT Paper
(antistatic, of polyester fiber-based; antistatic agents containing elec. conductive organic polymers)
IT 1639-66-3 13150-00-0 13177-49-6 14857-90-0 17766-32-4
178374-58-8 178374-59-9 178374-60-2
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(antistatic agents containing elec. conductive organic polymers)
IT 25233-30-1, **Polyaniline**
RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(antistatic agents containing elec. conductive organic polymers)
IT 112-34-5, Diethylene glycol monobutyl ether **3965-55-7**
RL: RCT (Reactant); RACT (Reactant or reagent)
(antistatic agents containing elec. conductive organic polymers)
IT **178374-58-8**
RL: MOA (Modifier or additive use); TEM (Technical or engineered material

use); USES (Uses)
(antistatic agents containing elec. conductive organic polymers)
RN 178374-58-8 HCAPLUS
CN 1,3-Benzenedicarboxylic acid, 5-sulfo-, 1,3-bis[2-(2-butoxyethoxy)ethyl] ester (9CI) (CA INDEX NAME)

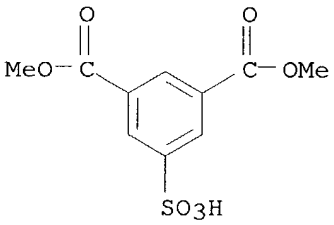
PAGE 1-A



PAGE 1-B



IT **3965-55-7**
RL: RCT (Reactant); RACT (Reactant or reagent)
(antistatic agents containing elec. conductive organic polymers)
RN 3965-55-7 HCAPLUS
CN 1,3-Benzenedicarboxylic acid, 5-sulfo-, 1,3-dimethyl ester, sodium salt (9CI) (CA INDEX NAME)



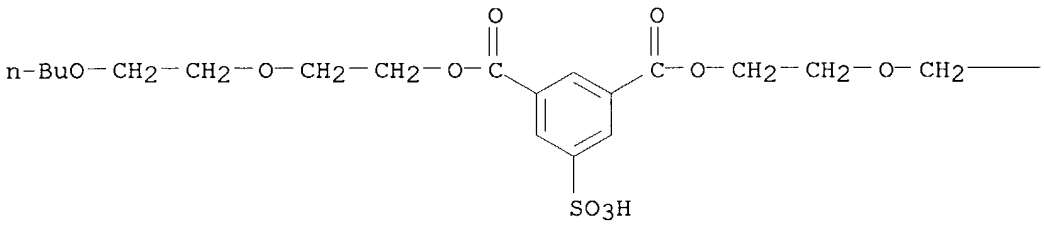
L48 ANSWER 27 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1996:404643 HCAPLUS
DN 125:61104
ED Entered STN: 13 Jul 1996
TI Anticorrosive coating materials containing electrically conductive organic polymers
IN Tani, Fumito; Yoshitani, Juji; Uno, Keiichi
PA Toyo Boseki, Japan; Toyobo Co., Ltd.
SO Jpn. Kokai Tokkyo Koho, 10 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM C08L079-00
ICS B05D005-00; B05D005-12; B05D007-14; C08G073-00; H01B001-12
CC 42-10 (Coatings, Inks, and Related Products)
Section cross-reference(s): 76
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 08092479	A2	19960409	JP 1994-229488	19940926
	JP 3506191	B2	20040315		
PRAI	JP 1994-229488		19940926		

OS MARPAT 125:61104
AB The title compns., with elec. conductivity >10-9 S/cm and in dope dispersion or solution, contain **polyaniline** and/or its derivs. and protonic acid dopants with (mol. weight of dopant)/N = 350-2000 (N = number of protonic group when pKa <4.0) (e.g., reaction products of di-Me 5-sulfosodiumisophthalate and diethylene glycol monobutyl ether).
ST anticorrosive coating elec conductive **polyaniline**; dimethyl sulfosodiumisophthalate adduct anticorrosive coating; diethylene glycol monobutyl ether adduct coating
IT Electric conductors, polymeric
(anticorrosive coating materials containing elec. conductive organic polymers)
IT Alkyd resins
RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(anticorrosive coating materials containing elec. conductive organic polymers)
IT Coating materials
(anticorrosive, anticorrosive coating materials containing elec. conductive organic polymers)
IT 1639-66-3 13150-00-0 13177-49-6 14857-90-0 17766-32-4
178374-58-8 178374-59-9 178374-60-2
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(anticorrosive coating materials containing elec. conductive organic polymers)
IT 25233-30-1, **Polyaniline** 75139-65-0, Vylon 82200-41-7, Vylonal MD 1200
RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(anticorrosive coating materials containing elec. conductive organic polymers)
IT 112-34-5, Diethylene glycol monobutyl ether **3965-55-7**
RL: RCT (Reactant); RACT (Reactant or reagent)
(anticorrosive coating materials containing elec. conductive organic polymers)

IT **178374-58-8**
RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
(anticorrosive coating materials containing elec. conductive organic polymers)
RN 178374-58-8 HCAPLUS
CN 1,3-Benzenedicarboxylic acid, 5-sulfo-, 1,3-bis[2-(2-butoxyethoxy)ethyl] ester (9CI) (CA INDEX NAME)

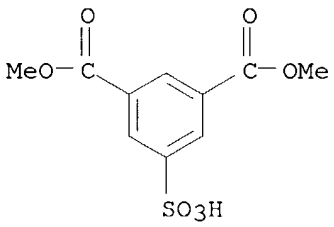
PAGE 1-A



PAGE 1-B

— CH_2 — OBu-n

IT **3965-55-7**
RL: RCT (Reactant); RACT (Reactant or reagent)
(anticorrosive coating materials containing elec. conductive organic polymers)
RN 3965-55-7 HCAPLUS
CN 1,3-Benzenedicarboxylic acid, 5-sulfo-, 1,3-dimethyl ester, sodium salt (9CI) (CA INDEX NAME)

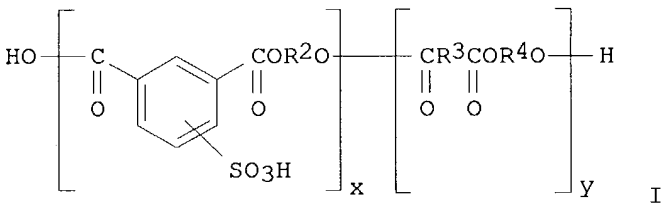


● Na

L48 ANSWER 28 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1996:262360 HCAPLUS
DN 124:329942
ED Entered STN: 04 May 1996
TI **Polyaniline** composition, electrically conducting thin film using it, and its manufacture
IN Tani, Fumito; Yoshitani, Juji; Uno, Keiichi
PA Toyo Boseki, Japan
SO Jpn. Kokai Tokkyo Koho, 8 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM C08L079-00
ICS C08G073-00; C08J005-18; C08K005-42; C08L067-02; H01B001-12; H01B005-14
ICA C08G063-688
CC 76-2 (Electric Phenomena)
Section cross-reference(s): 38
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 08041322	A2	19960213	JP 1994-181209	19940802
PRAI JP 1994-181209		19940802		

GI



I

AB The elec. conducting thin film is manufactured by applying a composition containing **polyaniline** and/or its derivative with weight average mol. weight <10,000 and ≥1 dopant selected from HO3SC6H4R1m (R1 = H, alkyl, alkoxy, alkoxycarbonyl, polyoxyalkylenecarbonyl, alkenyl, alkylthioalkyl, aryl, alkylaryl, arylalkyl, alkoxyalkyl, alkylthio, alkylsulfinyl, alkylsulfonyl, CO2H, nitrile, OH, NO2, halo; m = 2-5) and/or I (R2-4 = alkylene, phenylene; x, y = 1-50) on a substrate and drying. The composition showed good solubility for organic solvents and gave a film with good adhesion to a poly(ethylene terephthalate) substrate.
ST **polyaniline** doped elec conductor film; benzenesulfonic acid dopant **polyaniline** conductor
IT Electric conductors, polymeric
(benzenesulfonic acid derivative-doped **polyaniline** elec. conducting film and its manufacture)
IT Polymerization
(oxidative, benzenesulfonic acid derivative-doped **polyaniline** elec. conducting film and its manufacture)
IT **176236-29-6DP**, hydrolyzed 176236-31-0P
RL: MOA (Modifier or additive use); PNU (Preparation, unclassified); PREP (Preparation); USES (Uses)

(benzenesulfonic acid derivative-doped **polyaniline** elec. conducting film and its manufacture)

IT **176236-30-9P**
RL: MOA (Modifier or additive use); PNU (Preparation, unclassified); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(benzenesulfonic acid derivative-doped **polyaniline** elec. conducting film and its manufacture)

IT 25233-30-1P, **Polyaniline**
RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(benzenesulfonic acid derivative-doped **polyaniline** elec. conducting film and its manufacture)

IT 112-34-5, Diethylene glycol monobutyl ether **3965-55-7**, Dimethyl 5-sodiosulfoisophthalate
RL: RCT (Reactant); RACT (Reactant or reagent)
(benzenesulfonic acid derivative-doped **polyaniline** elec. conducting film and its manufacture)

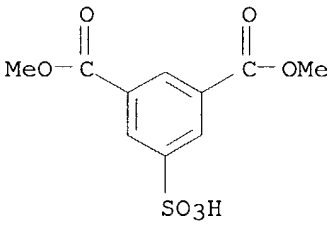
IT **176236-29-6DP**, hydrolyzed
RL: MOA (Modifier or additive use); PNU (Preparation, unclassified); PREP (Preparation); USES (Uses)
(benzenesulfonic acid derivative-doped **polyaniline** elec. conducting film and its manufacture)

RN 176236-29-6 HCAPLUS

CN 1,3-Benzenedicarboxylic acid, 5-sulfo-, 1,3-dimethyl ester, sodium salt, polymer with dimethyl 1,3-benzenedicarboxylate and 2,2-dimethyl-1,3-propanediol (9CI) (CA INDEX NAME)

CM 1

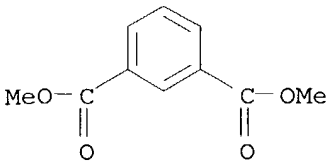
CRN 3965-55-7
CMF C10 H10 O7 S . Na



● Na

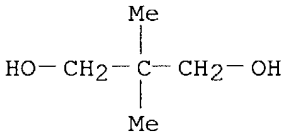
CM 2

CRN 1459-93-4
CMF C10 H10 O4



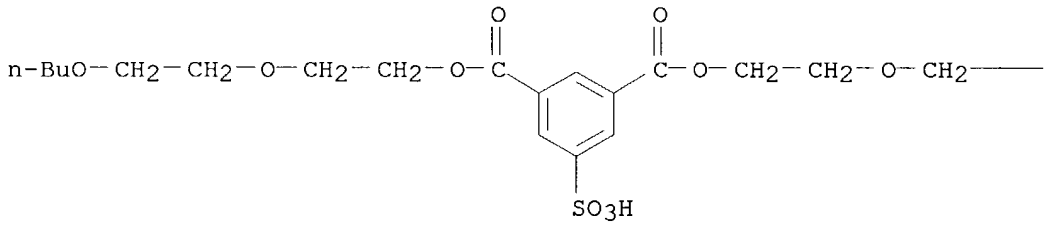
CM 3

CRN 126-30-7
CMF C5 H12 O2



IT **176236-30-9P**
RL: MOA (Modifier or additive use); PNU (Preparation, unclassified); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(benzenesulfonic acid derivative-doped **polyaniline** elec. conducting film and its manufacture)
RN 176236-30-9 HCAPLUS
CN 1,3-Benzenedicarboxylic acid, 5-sulfo-, 1,3-bis[2-(2-butoxyethoxy)ethyl] ester, sodium salt (9CI) (CA INDEX NAME)

PAGE 1-A



● Na

PAGE 1-B

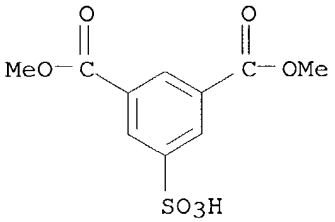
— CH_2 — OBu-n

IT **3965-55-7,** Dimethyl 5-sodiosulfoisophthalate

RL: RCT (Reactant); RACT (Reactant or reagent)
(benzenesulfonic acid derivative-doped **polyaniline** elec. conducting film and its manufacture)

RN 3965-55-7 HCAPLUS

CN 1,3-Benzenedicarboxylic acid, 5-sulfo-, 1,3-dimethyl ester, sodium salt (9CI) (CA INDEX NAME)



● Na

L48 ANSWER 29 OF 29 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1996:262359 HCAPLUS
DN 124:329941
ED Entered STN: 04 May 1996
TI **Polyaniline** composition, electrically conducting thin film using it, and its manufacture
IN Tani, Fumito; Yoshitani, Juji; Uno, Keiichi
PA Toyo Boseki, Japan; Toyobo Co., Ltd.
SO Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM C08L079-00
ICS C08G073-00; C08J005-18; C08K005-42; C08L067-02; H01B001-12; H01B005-14
ICA C08G063-688
CC 76-2 (Electric Phenomena)
Section cross-reference(s): 38
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 08041321	A2	19960213	JP 1994-180016	19940801
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PRAI JP 1994-180016		19940801		

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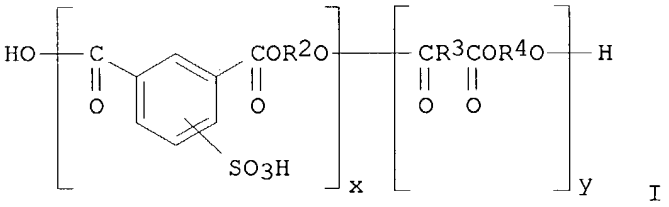


I

AB The elec. conducting thin film is manufactured by applying a composition containing **polyaniline** and/or its derivative and ≥1 dopant selected from HO3SC6H4R1m (R1 = H, alkyl, alkoxy, alkoxycarbonyl, polyoxyalkylenecarbonyl, alkenyl, alkylthioalkyl, aryl, alkylaryl, arylalkyl, alkoxyalkyl, alkylthio, alkylsulfinyl, alkylsulfonyl, CO2H, nitrile, OH, NO2, halo; m = 2-5) and/or I (R2-4 = alkylene, phenylene; x, y = 1-50) on a substrate and drying. The composition showed good solubility for organic solvents and gave a film with good adhesion to a poly(ethylene terephthalate) substrate.
ST **polyaniline** doped elec conductor film; benzenesulfonic acid dopant **polyaniline** conductor
IT Electric conductors, polymeric
(benzenesulfonic acid derivative-doped **polyaniline** elec. conducting film and its manufacture)
IT Polymerization
(oxidative, benzenesulfonic acid derivative-doped **polyaniline** elec. conducting film and its manufacture)
IT **176236-29-6DP**, hydrolyzed 176236-31-0P
RL: MOA (Modifier or additive use); PNU (Preparation, unclassified); PREP

(Preparation); USES (Uses)
(benzenesulfonic acid derivative-doped **polyaniline** elec. conducting film and its manufacture)

IT **176236-30-9P**
RL: MOA (Modifier or additive use); PNU (Preparation, unclassified); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(benzenesulfonic acid derivative-doped **polyaniline** elec. conducting film and its manufacture)

IT 25233-30-1P, **Polyaniline**
RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(benzenesulfonic acid derivative-doped **polyaniline** elec. conducting film and its manufacture)

IT 112-34-5, Diethylene glycol monobutyl ether **3965-55-7**, Dimethyl 5-sodiosulfoisophthalate
RL: RCT (Reactant); RACT (Reactant or reagent)
(benzenesulfonic acid derivative-doped **polyaniline** elec. conducting film and its manufacture)

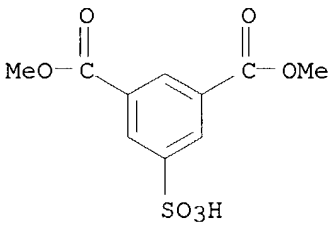
IT **176236-29-6DP**, hydrolyzed
RL: MOA (Modifier or additive use); PNU (Preparation, unclassified); PREP (Preparation); USES (Uses)
(benzenesulfonic acid derivative-doped **polyaniline** elec. conducting film and its manufacture)

RN 176236-29-6 HCAPLUS

CN 1,3-Benzenedicarboxylic acid, 5-sulfo-, 1,3-dimethyl ester, sodium salt, polymer with dimethyl 1,3-benzenedicarboxylate and 2,2-dimethyl-1,3-propanediol (9CI) (CA INDEX NAME)

CM 1

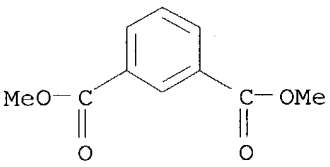
CRN 3965-55-7
CMF C10 H10 O7 S . Na



● Na

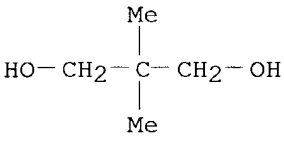
CM 2

CRN 1459-93-4
CMF C10 H10 O4



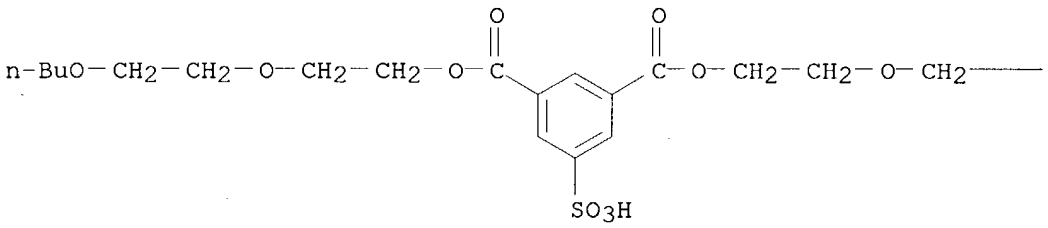
CM 3

CRN 126-30-7
CMF C5 H12 O2



IT **176236-30-9P**
RL: MOA (Modifier or additive use); PNU (Preparation, unclassified); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(benzenesulfonic acid derivative-doped **polyaniline** elec. conducting film and its manufacture)
RN 176236-30-9 HCAPLUS
CN 1,3-Benzenedicarboxylic acid, 5-sulfo-, 1,3-bis[2-(2-butoxyethoxy)ethyl] ester, sodium salt (9CI) (CA INDEX NAME)

PAGE 1-A



● Na

PAGE 1-B

— CH_2 — OBu-n

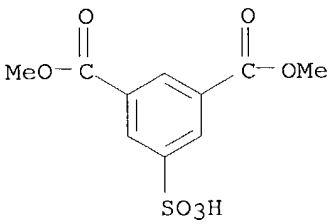
IT **3965-55-7,** Dimethyl 5-sodiosulfoisophthalate

KATHLEEN FULLER EIC 1700 REMSEN 4B28 571/272-2505

RL: RCT (Reactant); RACT (Reactant or reagent)
(benzenesulfonic acid derivative-doped **polyaniline** elec. conducting film and its manufacture)

RN 3965-55-7 HCAPLUS

CN 1,3-Benzenedicarboxylic acid, 5-sulfo-, 1,3-dimethyl ester, sodium salt (9CI) (CA INDEX NAME)



● Na

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